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ABSTRACT

To poll the facilities of Missouri's gifted programs to gather data concerning the programs and the philosophies of those who conduct them, a survey instrument mainly using a Likert scale was developed and mailed to an administrator, a classroom teacher, and a gifted resource room teacher from each of the sixty-nine districts receiving state aid for their gifted programs. The information from the surveys was tabulated by computer and yielded frequency data in terms of means, standard deviations, and cumulative percentages. The conclusions drawn were that there is no one best program for all gifted children, that each district must plan its program according to its needs, and that a committee formed to develop a program philosophy is an initial step. In addition, strong inservice programs to train teachers of the gifted, and university degree programs in gifted education are urgently needed in Missouri. (Author)

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A STUDY OF GIFTED PROGRAMS
IN THE STATE OF MISSOURI
AND THE PHILOSOPHIES OF THEIR FACULTIES

A Thesis
Presented to
the Faculty of the Graduate School
Southwest Missouri State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education--Reading

by
Judith Holden Dixon

July 1981

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Judith Holden Dixon

July 1981

James R. Layton
Dr. James R. Layton, Advisor

Michael L. Bell
Dr. Michael L. Bell

Lonnie Barker, Jr.
Dr. Lonnie Barker, Jr.

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Chapter 1

INTRODUCTION TO THE STUDY

Educators in the 1970's took up the discussion once more. It was a subject which had intrigued, alienated, and/or mystified people for at least a century (Getzels and Dillon, 1973). Authors and researchers could never seem to reach a conclusion upon which everyone could agree. What is giftedness? If one could identify and measure such a quality, what then does one do about it or with it?

In 1972, as a result of a report and recommendations by the United States Commissioner of Education, the Office of Gifted and Talented was established. Some states followed by creating sections within their own Education Departments to guide the appropriate education for their gifted children. Local school districts were allowed state funding to develop programs to meet the needs of the gifted children in each locale (Patterson, 1978).

Yet a nagging thought in the back of the minds of some writers of gifted literature continued to force the issue of proper foundations and evaluation of programs for the gifted. Joseph S. Renzulli, in an article reflecting on the past decade of acceptance and support for the gifted child movement in America, but in which he displayed his concern for the future, reminded readers,

The question that is continually being raised, however, is whether the movement will grow and prosper, or whether it will once again fade into obscurity as has happened so many times in the past (Renzulli, 1980:3).

He felt that it was imperative that more and thorough research be done to

test theories and models which had been proposed and were being used. Educators in the field of education for the gifted needed to develop as strong and as defensible a rationale for the practices they advocated as had been developed for the things they were against. He declared that, "If the field is to advance, we need competitive and even conflicting theories so that we may test one against the other in a never-ending search for better ways of serving gifted and talented youth" (Renzulli, 1980:4). Otherwise, educators of the gifted could not adequately and defensibly answer questions such as, "Isn't what you are doing for the gifted good for all youngsters?" Or, "How do you know that one approach to gifted education has certain advantages over another?"

Harold C. Lyon, Jr., Director of the Office for the Gifted and Talented in the United States Department of Education, spoke of some powerful myths surrounding gifted children and programs for the gifted which he thought needed to be destroyed. Four of these were:

1. The gifted and talented will do fine on their own. They do not need special help.
2. Teachers love gifted children. These children already receive all the extra attention they need.
3. Gifted education is an elitist and racist concept and is inappropriate in our egalitarian society.
4. A massive federal program is the answer to our problems in educating the gifted and talented (Lyon, 1981:18E-19E).

Lyon said that in the United States, according to the Constitution, the education system is characterized by federal concern, state responsibility, and local control. Currently, seventeen states have laws mandating appropriate education for all gifted children, and another thirty-three states have established guidelines for gifted programs (Lyon, 1981).

In the state of Missouri, school districts receiving state assist-

ance for their gifted programs reached sixty-nine by the 1980-81 school year ("State-Assisted Programs for Gifted Students: 1980-81," 1980). Dr. Nell Sanders, director of the gifted program for Missouri's Department of Education, reiterated what Renzulli said. She acknowledged that the education of Missouri's gifted was now in the spotlight of current interest, but that "only by questioning 'doctrine', by contradicting the 'obvious', and by challenging popular beliefs with the results of our experience can we continue to grow and improve"(Sanders, 1980:8+).

This study was undertaken in the sincere desire that legitimate questions from parents of gifted children, the children themselves, and the public at large concerning the necessity for and content of quality programs for the gifted be answered. Sanders correctly spoke of improving programs by analyzing the results of experience. Teachers and other educators who work with gifted children have this experience. Thus, perhaps by polling these educators, further growth and improvement can occur.

Statement of the Problem

Since one of the criticisms of some gifted programs is that their activities seem to be no more than just interesting ways to entertain bright youngsters (Renzulli, 1977), it seems important to determine if there are data to support the programs Missouri teachers use. These questions, designed to particularize the problem, might be considered:

1. Is there a specific type of program which most teachers of the gifted in Missouri feel is more beneficial to their students than any other?
2. Is there a major difference in philosophy between those work-

ing with gifted children from a resource room and those working with them in a regular classroom? How does the philosophy of the program administrator differ from these?

Questions to be Answered

Much has been written about prominent authors' views of certain aspects of gifted education. It might be appropriate to discover if the people in the field, that is, the teachers and administrators of the Missouri programs, agree with the espoused information from these writers. Based on this information, the following more specific questions were posed:

1. Do most teachers/administrators acknowledge that gifted school children of all ages should be reached through a district's gifted program?
2. Are there specific qualities that differentiate teachers of the gifted from other good teachers?
3. Is it necessary for the gifted program to have the cooperation of the entire faculty of a district, and, if so, is a strong in-service training program the best way to insure that?
4. Do the regular classroom teachers of gifted children encounter problems with certain gifted program models, and, if so, are there ways to minimize the problems?
5. If a program model relied on a regular classroom teacher for primary identification of children to receive the benefit of the resource room, would the regular teacher feel and be capable of that responsibility?
6. From past experience, is a cut-off IQ range an adequate deter-

miner of children for a gifted program, or would it be more helpful to lower the IQ requirement and use it in conjunction with other factors, such as creativity and commitment to a task?

7. Can one assume that gifted children are basically the same in their development as other children, but perhaps merely precocious in it? If this is so, does this dictate a need for them to be provided a different learning style, a different environment, different content, or faster rate?

8. Would the best use of a gifted resource room be to identify a limited number of children who would receive benefits for one school year, or to develop a talent pool from which children could be chosen for participation as their strong interest in a topic is discovered?

9. Would the best use of a resource room teacher's talents be as a teacher of a whole class of gifted students utilizing a certain type of curriculum, or as an instrument to further each individual child's interest in a particular topic or project?

10. Since gifted children are capable of doing higher process thinking, yet are highly product-oriented, should the gifted program have as its major goal the teaching of learning processes or the encouraging of an individual's products?

11. Should regular teachers of gifted children strongly be encouraged to compact curriculum for them so that not only will they have time to participate in the program but they can cover curriculum material at a pace appropriate for their ability levels?

12. Are behavioral objectives an adequate way to evaluate a gifted program's student goals or should there be instead other measures, such as the children's creative products or student-teacher questionnaires?

Purpose of the Study

The purpose of the study will be to contact Missouri's teachers of the gifted, the administrators of those programs, and some classroom teachers who have gifted children among their regular students in order to survey, tabulate, and analyze their responses to questions concerning the education of Missouri's gifted children.

Value of the Study

Many authorities in the field of education have written their ideas on how best to work with gifted children. Some of these ideas have been accepted as valid; others are hotly debated in educational journals. It would seem helpful to get the opinions of those who actually have tested some of the ideas as they have developed and operated programs for gifted children.

Some of the programs may have been considered successful. Some may have pointed the way to other conclusions. Some may have been undertaken without sufficient thought toward a philosophy or major goals. Perhaps workers in such programs might express opinions helpful to others in the process of developing a program. Whatever the outcome of such a survey, it would seem to be true that only "by challenging popular beliefs with the results of our experience can we continue to grow and improve" (Sanders, 1980:8+).

Assumptions

For the purpose of this study, it is assumed that:

1. The survey instrument used to collect the data was sufficiently sensitive to the information desired.

2. The respondents completed the survey in an honest and forthright manner and the opinions collected were their true opinions.

3. The information collected from the survey was interpreted correctly by the investigator.

Limitations of the Study

This study will be limited in the following respects:

1. Only those teachers and administrators will be asked to respond to the survey who work with gifted children in their school district in school year 1980-81.

2. The teachers and administrators asked to respond will be limited to those associated with a Missouri gifted program.

3. The study will be limited to the frequency data compiled from the survey instrument.

4. The results of the survey will be limited, therefore, to the viewpoint of the respondents depending upon their training, own reading and research, and experience with types of gifted programs.

5. The results of this study will be limited by the percentage of school districts who respond to the request for their participation.

All generalizations and inferences made from this study will be stated with these limitations in mind.

Definitions of Terms

Specific terms used in this study were defined as follows:

1. Behavioral objectives--specific anticipated outcomes of teaching, usually stating the condition under which a specified behavior will occur, the type of behavior that is to occur as a result of planned

instruction, and the performance level that will be accepted (Harris and Sipay, 1975);

2. Classroom teacher--the teacher who has the gifted child daily in his/her room for the basic subjects;

3. Delivery system--the organization, scheduling, and special administrative arrangements made so that a gifted child can receive the services of the school district;

4. Gifted child--a child who demonstrates one or more signs of giftedness as defined below, and by virtue of outstanding abilities, is capable of high performance;

5. Giftedness--demonstrated high intellectual ability in relation to IQ and/or creativity; this definition does not intend to preclude Renzulli's definition which combines creativity and above average general ability with task commitment and is manifested in some form of valued activity (Renzulli and Smith, 1980);

6. Higher process thinking--thinking which goes beyond memorizing facts into such areas as problem-solving, logical reasoning, prediction, creativity, divergent and convergent production, and evaluation;

7. Identification of gifted children--the process used by each school district to select eligible children for the district's gifted services;

8. In-service training program--plan used to educate the faculty of a school system during the school year;

9. Mainstream--to educate an identified small group of children with the larger majority using no special classes;

10. Mainstream teacher--the same as a classroom teacher;

11. Programs for the gifted--plans by which a school system can

adapt its curriculum to meet the needs of gifted children;

12. Regular teacher--the same as a classroom teacher;

13. Resource room--a separate room used to teach special classes for gifted children;

14. Resource room teacher--a teacher whose specific duties include overseeing the education of gifted children;

15. Teacher of the gifted--the same as the resource room teacher.

The Instrument

In order to answer the questions which were posed earlier in this paper, a survey instrument was developed using a Likert scale (Appendix A). Thirty-six statements were included in it, half of them the negative counterpart of the other eighteen. This was done so that more accurate opinions might be obtained from the participants.

Two additional questions were included which were not of the same nature. They were incorporated so that it might be possible to determine the experience of the respondents with models or processes in gifted programs, and their opinions of the various types of delivery systems for programs.

A brief cover letter addressed to the program administrators accompanied the survey. Five questions were asked of these administrators on the face of the letter to aid the investigator in understanding the philosophy of the school district.

Design of the Study

This study is a review of related literature on the research con-

cerning gifted children, their characteristics and needs, their identification, and the programs which attempt to meet their needs. It also includes a survey of the teachers and administrators of Missouri's gifted children in order to determine what is being done in the programs in Missouri. Finally, it is an analysis of the frequency data gathered from the survey to discover what practices experienced Missouri teachers think are successful in working with gifted children.

Chapter 1 contains an introduction to the study, a statement of the problem, questions to be answered, the purpose, the value, the assumptions and limitations, definition of relevant terms, and a discussion of the instrument to be used.

Chapter 2 consists of the review of related literature concerning gifted children. Chapter 3 consists of a detailed description of the procedures used in the study. An introduction, an extended look at the instrument, and a step-by-step explanation of the procedure will be given. Included in this chapter is a description of several well-known models referred to frequently in the literature on gifted programs. Chapter 4 contains an analysis of the data received from the instrument to allow the investigator to answer the questions posed. Chapter 5 is composed of a summary followed by conclusions and recommendations as found in this study.

Chapter 2

REVIEW OF RELATED LITERATURE

At an instructional leadership conference held in Missouri in 1980, a speaker told of the decline in the rate of growth of the State-Assisted Gifted Programs from that of the last three years. Four hundred eighty-six Missouri districts did not then operate a state-funded program for gifted students. In the past school year, less than one out of five gifted students had a program designed especially to meet their needs ("The State-Assisted Program for Gifted Students," 1980). Yet recent educational journals and magazines are filled with articles by people who profess to advise a school district on how best to serve their gifted population.

One problem which a district might face if it were considering a gifted program is which program would most successfully meet the needs of that district's gifted children. To help respond to this problem, two questions were developed for the study reported in this paper.

1. Is there a specific type of program which most teachers of the gifted in Missouri feel is more beneficial to their students than any other?

2. Is there a major difference in philosophy between those working with gifted children from a resource room and those working with them in a regular classroom? How does the philosophy of the program administrator differ from these?

A review of literature written on the subject of gifted programs across the nation is the intent of this chapter.

Definitions of Giftedness

No one can adequately complete a review of the literature concerning giftedness without encountering the most important study published by Terman in 1925. His Genetic Studies of Genius was the beginning of a massive longitudinal investigation projected to continue until the year 2010 in order to discover the characteristic traits of 1500 children (and their later adult traits) whose Stanford-Binet IQ's were an average of 150. His research was so well-done that Getzels and Dillon (1973:694) lauded the fact that research into intellectual giftedness still was confirming many of Terman's findings "with a regularity bordering on redundancy."

It was Terman's study added to the development of the intelligence test that identified the term giftedness with intellectual talent alone. Only recently did conceptions of nonintellectual giftedness gain attention and acceptance. Presently, it is an accepted practice to speak of definitions of giftedness.

Distinctions among them [the definitions] may be made with respect to the ability specified, whether intellectual or nonintellectual. Within the intellectual abilities, one may further distinguish between high IQ and high creativity; and within the nonintellectual, among various talents such as the social, aesthetic and mechanical. Definitions also distinguish between potential and demonstrated ability, its rate of development and its degree of exceptionality; they may place the gifted in the top 1 percent or 10 percent of a population, general or specific, or above a cut-off line arbitrarily drawn "at IQ 120, 130, 140, 150, or anywhere else in the superior range" (Getzels and Dillon, 1973:690).

Getzels and Dillon carefully added that since there was seemingly no hope for formulating a single satisfactory definition of giftedness, each study should specify the definition and the population to which it applied and care should be taken in comparing different studies (Getzels and Dillon, 1973).

In 1977, a far different definition, called an operational definition by its creator, Dr. Joseph S. Renzulli, was published (Renzulli, 1977). He extensively studied research dealing with the characteristics of gifted and talented individuals and determined that

people recognized for their unique accomplishments and creative contributions display not one but three clusters of traits: above average, though not necessarily superior, general ability; task commitment--the capacity to choose a job or interest and stick with it; and creativity--the capacity to generate diverse, often novel products and solutions to problems. These three clusters interact as "equal partners" in giftedness, which must, finally, be manifest in some form of valued activity (Renzulli and Smith, 1980:92).

Programming for the Gifted

Data was available from the United States Office of Education in 1942 to show that in the year 1936, there were three thousand children enrolled in programs for the gifted (Getzels and Dillon, 1973). In a fact sheet taken from a 1971 government report, it was recorded that only 4 percent of the 2.5 million children identified as gifted or talented by the United States Office of Education were being served by special programs. In fact, of all the schools surveyed for this report, 57.5 percent of their administrators stated that they had no gifted or talented children within their districts (National Fact Sheet on the Gifted and Talented, 1971). Dr. Harold C. Lyon, Jr., current director of the Office for the Gifted and Talented, reported that today our schools serve approximately 35 percent (Lyon, 1981). Gallagher attempted to explain what he termed "the presence in the American society of a love-hate relationship with giftedness and talent." He paraphrased Gardner when he said,

On one hand, we revere the gifted individual who has risen from humble background. We are proud to live in a society where talent can triumph over environment or family status. At the same time, since our origins came from battling an aristocratic elite, we are suspicious of attempts to subvert our commitment to egalitarianism. We

do not wish a new elite class to develop, and as a result we seem to waver in our attitudes. We design our elementary and secondary programs for gifted students in ways that can be defended by careful administrators as giving no special favors, no tipping the scales in favor of the socially powerful or the specially endowed (Gallagher, 1979:40).

Acceleration

Perhaps the "love-hate relationship" is seen in the type of programs offered for gifted children. The literature commonly grouped research in the area of types of programs under the headings of Acceleration, Grouping, and Enrichment. It is interesting to note that in 1973, more evidence was available in favor of acceleration than of grouping or enrichment, yet acceleration was the least practiced device for educating the gifted (Getzels and Dillon, 1973). According to the United States Office of Gifted and Talented, acceleration programs generally cover the same material as the regular curriculum but at a faster pace (Curriculum for the Gifted and Talented, 1978). Advocates of acceleration pointed out that perhaps the key characteristic of gifted and talented people is that their rate of dealing with new information is much faster than average (Keating, 1979). Christopherson (1979), who suggested using the term developmental placement instead of acceleration, felt that since theories of learning and development showed intellectually gifted children to be like other, older children, rather than different, they should be placed with the older children. He noted that Terman's study made people aware that intellectually gifted children were more advanced educationally, socially, emotionally, and physically than their age peers. But he emphasized that they were merely precocious, not different.

Gallagher (1959) listed several methods of acceleration. These were early entry into school, grade skipping, and an ungraded primary

whose curriculum could be finished early. Other authors listed rapid advance classes, accelerated high school programs, the offering of college courses during the high school years, the offering of summer college courses to high school students, provision for early entrance into college, credit by examination, and telescoping junior high as means of acceleration (Juntune) (Mallis and Heinemann, 1978).

Stanley quoted Daurio in two articles praising acceleration. Daurio had reviewed the literature on the acceleration versus enrichment controversy and found not a single substantial study which proved the educational acceleration of intellectually talented youths to be harmful. He could locate almost no studies of enrichment which perceived it as effective as acceleration. Stanley added that, on the contrary, frustrating the natural pace of highly apt students could cause serious academic and emotional damage (Stanley, 1978; 1980).

Tuttle also reviewed the literature, and agreed with Daurio's findings. He summed up his discussion by saying that acceleration should be begun early, selecting those gifted individuals who displayed social maturity as well as intellectual superiority. He cautioned, however, that the curriculum should be modified to the individual needs of each learner and not be merely rapid movement through the grades.

Grouping

A second procedure used in the programming of gifted children places students in special classes, tracks, or streams according to age, ability or preference. Grouping has been sharply debated over the years, the controversy revolving as much around democratic and egalitarian issues as about the effectiveness of it for improving academic achievement. Researchers have obtained contradictory conclusions. Getzels and Dillon

paraphrased Gold to sum up their discussion of it. He found grouping apparently helpful but not automatically effective. Grouping should be accompanied by a differentiation in teacher quality, curriculum, guidance and method for effectiveness (Getzels and Dillon, 1973).

Enrichment

In a generic sense, all types of adjustments for gifted students are forms of enrichment, but in the literature concerning categories of programs, the term generally was used to designate those provisions of different learning experiences in an otherwise heterogeneous classroom (Getzels and Dillon, 1973). The United States Office of Gifted and Talented defined enrichment programs as "those which go beyond normal classroom activity by offering students a greater latitude of inquiry" (Curriculum for the Gifted and Talented, 1978). Writers for a Texas in-service program for teachers of the gifted and talented thought enrichment meant activities with a purpose which teachers could incorporate in their regular schedules without special permission from administrators (Mallis and Heinemann, 1978). The most specific definition this researcher found was Gallagher's.

Enrichment can be defined as the type of activity devoted to the further development of the particular intellectual skills and talents of the gifted child. Research indicates that these major skills are:

1. The ability to associate and interrelate concepts
2. The ability to evaluate facts and arguments critically
3. The ability to create new ideas and originate new lines of thought
4. The ability to reason through complex problems
5. The ability to understand other situations, other times, and other people; to be less bound by one's own peculiar environmental surroundings.

. . . Unless the extra activity planned for the gifted child is directed to the advancement of the characteristics named, it deserves to be called "busy work" rather than enrichment (Gallagher, 1959:21).

Program Options

But how does one achieve the kind of program which will best meet the needs of really gifted youngsters? To achieve a qualitatively different program for gifted students, a United States Office of Education advisory panel recommended that the program have three characteristics. They were:

a planned curriculum which emphasizes higher level cognitive and affective processes; instructional strategies which respond to the individual learning styles and abilities of gifted students; and an appropriate delivery system for these services (Administrative Manual and Guidelines: State-Assisted Program for Gifted Students, 1980:2).

Of course, the goal of any gifted program should be to supply meaningful learning experiences in the most effective and efficient way so that learning and individual development will be maximized and boredom, confusion, and frustration minimized. But not all educators of the gifted have agreed on how best to accomplish this (Fox, 1979).

Gallagher has determined that instruction has four major components: content, rate, mode, and environment (Fox, 1979). But with reference to content, gifted students have less need of repetition of content and basic skills than do other students. They have more need of opportunities:

1. to practice reasoning and problem-solving skills;
2. to use and develop more fully skills in analyzing, synthesizing, and evaluating;
3. to practice research skills;
4. to develop creativity and leadership ability; and
5. to increase affective skills, such as self-appraisal, decision-making, and values clarification ("The State-Assisted Program for Gifted Students - 1980-81," 1980).

Fox thought that if one defined enrichment as the provision for learning experiences that developed higher processes of thinking and creativity in a subject area (content) and he defined acceleration (rate) as the adjustment of learning time to meet the individual capabilities of the students, then the two terms were complementary rather than conflicting. Other writers agreed that a good program for the gifted did contain enrichment as well as acceleration (Feldhusen and Kolloff, 1978) (Mallis and Heinemann, 1978).

Fox continued his elaboration of Gallagher's four components by discussing mode. He recommended diagnostic-prescriptive teaching from which would be developed an individual sequential program of learning. The learning process could be accomplished by such means as tutoring, programmed instruction, learning centers, or other variations (Fox, 1979). As an aid in discovering a student's most favored learning styles, Smith has developed her Learning Styles Inventory. This instrument, filled out by the students, provides scores for nine learning style dimensions, including lecture, discussion, simulation, and independent study (Renzulli, 1977). Finally, Fox considered environment to include factors such as the design and condition of the building, appropriate equipment and materials, peers, teachers, and an atmosphere of trust and respect among individuals.

If a school system had determined to serve its gifted students and had decided upon the four major components related to instruction, still another decision would have to be made. What kind of organization, scheduling, and special administrative arrangements should there be in order for the gifted children to receive the service of the school district? These arrangements might be titled the delivery system.

There are many types of delivery systems in use over the United States. The state of Missouri, according to a 1980 report, uses the following:

1. Individuals and cluster groups may work under the supervision of the regular classroom teacher who is assisted by an Educational Resource Teacher.
2. Groups of students may work in a resource room setting for one or more sessions per week, under the guidance of a resource room teacher. Sometimes the students or the teacher may be transported from one school to another, depending on the local situation. Groups may also meet before or after school.
3. Special classes of gifted students may meet on a daily basis for all or part of the school day.
4. Mini-courses and seminars can be offered before, during or after school hours (including weekends) ("The State-Assisted Program for Gifted Students - 1980-81," 1980).

Other types of delivery systems are special schools; the various ways of accelerating youngsters discussed in this paper previously; individualized study using perhaps programmed text materials, a correspondence course, or a tutor/mentor; within-class individualization (also called mainstreaming) (Fox, 1979); summer school; and internships for older students (Mallis and Heinemann, 1978).

One of the least understood of the above program options is the one using a tutor/mentor. Fox (1979) emphasized that there was a subtle difference between the tutor and the mentor. The tutor supposedly teaches content in a systematic way in a one-on-one relationship. The mentor may have no organized agenda for instruction. In an article by Runions, a decade of documenting the tutoring process was explained. He analyzed the research completed by stating that "in general, all learners are capable of tutoring, all learners can benefit from tutoring, and the full potential of tutoring has yet to be realized." He also defined mentors as gifted/talented tutors. Mentoring, according to Runions, is the

gifted/talented tutoring the gifted/talented. He underlined the importance of mentors as being one of society's best resources for realizing learning potentials (Runions, 1980:152-3).

When should these special programs begin in the life of a gifted child? Rubenzer (1979) felt that timing was a critical factor. He spoke of a 1958 article which held that the identification of giftedness had to occur by the third grade if irretrievable loss of talent were not to take place. By 1975, however, it was contended that kindergarten was not too soon if the effects of emotional and intellectual recession were to be minimized. A fact sheet from the United States Office of Gifted and Talented stated that the greatest number of school adjustment problems for the gifted child occur between kindergarten and fourth grade. By ten years old, almost 50 percent have become mental dropouts. Actual dropouts from school were given intelligence tests in a state-wide survey. Approximately 3.4 percent were found to have an IQ of 120 or higher. It was also reported on the fact sheet that the majority of the government's recorded gifted programs are at the high school level--"too little, too late" (National Fact Sheet on the Gifted and Talented, 1971).

Identification of Gifted Students

In a review of the literature on the identification of children who are gifted, it became apparent that there was no agreement on what the best method was. The United States Office of Education [USOE], in order to fund gifted programs throughout the country, set an arbitrary figure for the number of gifted and talented children existing among the school-age population. That figure was 5 percent, or about 2.5 million children (Lyon, 1981). The decision necessarily made by each state was

how to identify the children who would make up that 5 percent.

To aid in the identification, the USOE developed a working definition of the gifted and talented, which was:

children capable of high performance, including those with demonstrated achievement or ability in any one or more of these areas-- general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, or psychomotor ability (Sisk, 1977:2).

Rubenzer paraphrased Stark who explained each area of the USOE's definition.

More operationally defined, children of generally high intellectual ability will function exceedingly well in almost all academic areas. Children who exhibit specific academic aptitudes typically excel in perhaps only one or two academic areas. The child with exceptional creative ability can be described as the pupil who generates unusual, frequent, and high quality ideas or solutions to problems. Children with leadership ability demonstrate consistently exceptional capacity to motivate and organize other children. High ability in the visual and performing arts will often be indicated by exceptionally good aesthetic production in such areas as the graphic arts, sculpture, music and dance. The child with exceptional mechanical reasoning skills or superior athletic ability can be classified as possessing talent in the psycho-motor area of functioning (Rubenzer, 1979:304-5).

Finally, however, each state had to decide upon its selection criteria. The state of Missouri requires three of the four following criteria, giving the school district the selection of the most appropriate for them:

1. Scores on an individual intelligence test at or above the 95th percentile, or two such percentile scores from group intelligence tests;
2. Scores on standardized achievement tests at or above the 95th percentile in the subject area(s) most related to the design of the district's gifted program;
3. Results of valid tests or assessments indicating outstanding ability in creativity, reasoning, or problem-solving ability;

4. Nominations, supported by documented evidence of outstanding performance, by persons from two or more of the following groups: parents, peers, teachers, other school personnel, or external professionals who are experts in a program area (Administrative Manual and Guidelines: State-Assisted Program for Gifted Students, 1980).

Among the literature on the identification of gifted children, there was much criticism of past and/or present methods of identification. From the 1971 land-mark government report (the Marland Report) came the statements that group intelligence tests fail to identify 50 percent of gifted children, and that teacher identification fails over 50 percent of the time. It was discovered that group intelligence testing often penalizes the gifted pupil and should not even be used for screening before the third grade. Other factors complicate evaluation by conventional testing procedures. These factors are sampling biases in tests which may be designed primarily for the white middle class; lack of expertise of some test administrators; some possible effects from test anxiety; and the motivational state of the subject. To identify areas of talent other than intellectual ability and specific academic aptitude, more reliance on subjective criteria was recommended (Rubenzer, 1979). Therefore, no great accuracy was yet claimed in the identification of these other four USOE categories.

Keating (1979) questioned the concept of global ability used in identifying gifted pupils. He saw this ability, as measured by most intelligence tests, as a useful initial index of general ability, but not as an instrument for placement into gifted programs. Stanley agreed when he explained that if a child must average high by earning a high IQ, some with excellent special abilities will be missed (Stanley, 1979).

Children with specific academic aptitudes are not always high in all areas measured by an intelligence test.

Renzulli criticized the persons who continue to misuse the six USOE categories by requiring a relatively high intelligence or aptitude score as a minimum requirement for entrance into a special program (Renzulli, 1979). He also deplored viewing giftedness as an absolute concept, so that most identification efforts would be directed toward discovering which child has it. He regarded giftedness as a relative or situational concept, "a set of behaviors that emerge when certain traits interact with one another in relation to a particular topic, area of interest, or specific talent (Renzulli, 1980:4).

Also found in the literature on the identification of gifted children were several suggestions for change in the future's procedures. Although the USOE's bulletin in 1979 continued to recommend achievement and intelligence tests with scores in the upper 2 to 3 percentiles of national or local norms for the intellectually gifted, it did suggest multiple criteria and some subjective assessments (Developing Programs for the Gifted and Talented, 1978).

Rubenzer found what for him seemed a viable identification model in the specific academic aptitude talent area. It was developed by Gowan in 1967 and included much teacher involvement (Appendix B).

Renzulli and Smith (1977) investigated the efficiency and effectiveness of traditional and case study approaches to the identification of academically gifted elementary students. The traditional method consisted of giving group ability tests to all students in the grades from which program participants would be selected and administering individual intelligence tests to the students whose scores were above a certain

level on the group test. The case study approach usually included such data as:

1. information from aptitude and/or achievement test scores;
2. ratings by teachers;
3. information from cumulative records;
4. parent ratings; and
5. student self-ratings.

The results found the case study approach generally superior. Renzulli and Smith summed up the study by recommending an identification system based on a combination of the two approaches.

More currently, Renzulli and Smith coauthored with Reis a book containing an unusual approach to identification called the Revolving Door Identification Model. Using Renzulli's definition of giftedness mentioned earlier in this paper, classroom teachers would identify a child who seemed turned on to a particular topic, area of study, issue, event, or form of creative expression. Since the number of children eligible for the gifted and talented program is 5 percent of the school's population, this identified child would take one of those places in the program. He or she would remain in the program until his or her project were completed. He or she might be re-contracted for the program or might leave to make room for another identified child (Renzulli and Smith, 1980). Reis, writing about the Torrington Talented and Gifted Program (TAG) which uses the revolving door model, spoke of the creation of a talent pool of 25-30 percent of their school population who are eligible for enrichment experiences, including acceleration and entry into the TAG resource room (Reis, 1981). A plan such as the Torrington model would most likely serve more children than the USOE 5 percent plan used alone.

Defensible Programs for the Gifted

Renzulli seems to be one of the most productive yet critical writers in the gifted movement at this time. One of the statements he reiterated in most articles this researcher read was that in many gifted programs there continues to be an overemphasis on what he called cutesie activities. By this term he meant the "endless proliferation of unrelated activities that basically have all the characteristics of an academic recess" (Renzulli, 1979:4). Another of his frustrations was the lack of identification and utilization of student interests and their preferred learning styles. A third frustration concerned the use of process models, such as Bloom's Taxonomy of Educational Objectives and Guilford's Structure of the Intellect (see Chapter 3 of this paper), as the sole rationale for special programs. He felt that many program developers had misunderstood the purpose for those process models. He also thought that some people had mistakenly begun to believe that gifted people were process oriented. He contended that instead they were highly product oriented--processes were the paths rather than the goals of their creative efforts (Renzulli, 1980). He regretted the little attention that had been given by most program planners to the development of systems, theories, or models that could be used as defensible rationales for the day-to-day activities advocated for gifted children. He himself published what he considered a defensible system in 1977 called the Enrichment Triad Model. Since it is quite well-known, frequently used, and was used by this investigator to develop questions for her survey instrument, it will be explained as part of Chapter 3 of this paper. However, there were several other programs which were either recommended as systematic and defensible by Renzulli or were decided to be so by this

investigator. A brief explanation of these follows.

Gifted Extension Model

Developed by Carolyn Tennant, this model included a combination of Renzulli's Enrichment Triad Model and a cognitive staff development training program. It seemed systematic and defensible because it appeared to be comprehensive in planning and coverage, and clear in its explanation of the difference between the Regular Program Core for all students and the expansion available for gifted students. The following outline was adapted from a short article on the four major sections of the model and what comprises each section.

I. Content

A. Knowledge

1. Subject area expansion (including acceleration)
2. Supplementary subjects (enrichment)
3. Activity orientation

B. Skills

1. Minimum acceptable level of performance
2. Desirable level of performance
3. Extra Skills

C. Attitudes

II. Process

A. Decision-making

1. Personal and social consequences
2. Possible alternatives

B. Creativity

1. Use of ideas from Torrance, Guilford, and Treffinger
2. Opportunity to express

C. Cognition

1. Use of higher levels of thinking
2. Goal of becoming independent thinkers
3. Re-creation of their thinking process for later evaluation

III. Output

- A. Useful products for appropriate audiences
- B. Opportunities to find solutions to real-life problems

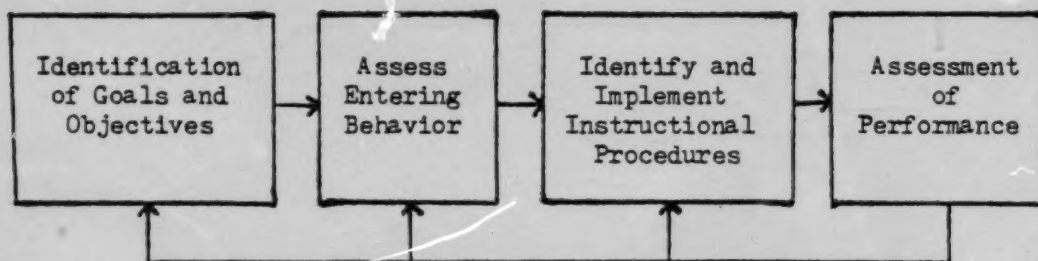
IV. Evaluation

- A. Beyond normal grades
- B. Self-initiated re-thinking of process to product (Blair, 1980)

Self-Directed Learning

In an article by Donald J. Treffinger, the goal of self-directed learning was advocated as a way to utilize the attributes of gifted children and provide them with the possibility of increased involvement and strong, positive motivation for learning.

The author first illustrated a model showing the four basic factors which he thought could be used to analyze any instructional event or sequence.



(Treffinger, 1975:52)

Treffinger suggested that self-directed learning could be fostered in each of the four areas through systematic efforts to provide the students with experiences involving increasing degrees and kinds of self-

management. An example of this follows.

GOALS AND OBJECTIVES

Teacher-directed:	teacher prescribes for pupils
Self-directed, first step:	teacher provides choices for pupils
Self-directed, second step:	teacher involves pupil in creating options
Self-directed, third step:	learner controls choices, teacher provides resources and materials

These gradual changes in learner responsibility should occur in each of the four steps. Treffinger believed that ultimately this would help reach the goal of a more creative learning environment for the gifted and talented (Treffinger, 1975).

Individualized Educational Planning

In proposing this plan, Wolf and Stephens assumed that the teacher had accepted the fact of differing rates of learning and the idea that students could assume some responsibilities for their own learning. Although the authors mentioned other ways of individualized educational planning, such as special classes or schools, acceleration of various types, in-class extra assignments, or enriched experiences, the type they proposed in this article was independent study. The arrangements were accomplished by using contracts established and agreed upon by teachers, students, and when appropriate, parents. Some contracts were arranged within the confines of the classroom, some called upon community or other school system resources. Such a method allowed a gifted student to be served within a regular classroom, yet gave the opportunity for in-depth pursuit of a topic or field of study. The student could use outside resources when appropriate, could make decisions about the mode and media to be used, and could assume some responsibility toward learning (Wolf and Stephens, 1979). In most cases, this type of plan might be more appropriate for the older gifted student.

Three-Stage Model for Gifted Education

Feldhusen and Kolloff designed with this model an enrichment program with guidelines and objectives. The guidelines were:

1. a systematic program of identification
2. small groups' meetings at least twice a week
3. instructional objectives formulated and used as guides for all activities
4. activities intellectually stimulating and challenging
5. some activities directed toward developing independent study and learning skills
6. much stress on challenging reading and discussion

The model proposed three levels of instructional activity. All could be used intermittently, but with increasing emphasis on the higher levels. Stage One was concerned with development of basic divergent and convergent cognitive abilities, led by the teacher. Stage Two called for more complex creative and problem-solving activities requiring increased student initiative and less teacher control. Stage Three included challenging independent research projects. These were based on the students' own interests, and they could work individually or in small groups toward realistic goals with some end product. The teacher aided or served as a resource person (Feldhusen and Kolloff, 1978).

Creative Problem-Solving Process

Although this process, developed by Dr. Sidney J. Parnes, is not a model and therefore cannot be used as a total program for gifted children, it seems systematic and an able tool in parts of other models described elsewhere in this paper. A brief outline follows.

I. Overview of Situation

- A. What is the general picture of the situation?
- B. Why is it a problem?

II. Fact Finding

- A. Who?
- B. What?
- C. When?
- D. Where?
- E. How?

III. Problem-Finding

- A. Pinpoint the actual problem
 - 1. "In what ways might I.....?"
 - 2. "How many ways can I?"

IV. Idea-Finding or "Brainstorming"

- A. Withhold judgment
- B. Suggest and record in phrases, not sentences
- C. Suggest ideas as fast as possible
- D. Hitchhike or piggy-back on ideas
- E. Suggest "far-out," "almost impossible" ideas

V. Solution-Finding

- A. Set up five or six criteria which are specifically appropriate for judging your suggested solutions
- B. Set up a matrix:

Criteria

						Total
1.						
2.						
3.						
4.						
5.						
6.						

- C. Decide on a scale; e.g., 4 = Superior; 3 = Good; 2 = Average; 1 = Poor; 0 = Useless

VI. Acceptance-Finding

- A. Plan of action
- B. Solution modification

(Frost)

Program Development

There were many articles in the literature on how a district should proceed to set up a quality gifted program. Two of the most complete were written by the Executive Director of the National Association for Gifted Children, Joyce Juntune. The first step a district committee should do, according to Juntune, would be to establish a philosophy. It would address the issue of why the program was needed, the district's definition of education for the gifted and talented, what the projected results would be for the pupils involved and the method for achieving these outcomes.

From the philosophy, the goals and objectives would be formulated. These goals and objectives would state what is planned to be accomplished and how. Those two elements would control every stage of the endeavor from planning to evaluation.

The third step Juntune listed was to define selection criteria. She felt that the program philosophy, goals, and objectives would give direction in determining the selection criteria. That is, the program design should dictate the type of students chosen to benefit from it (Juntune). However, other writers disagreed. Some thought the student population should be surveyed to discover who the students were who needed special provisions and what kind of provisions were needed (Mallis and Heinemann, 1978). All writers researched for this paper emphasized that there were multiple ways of programming for gifted and talented students and that there was no perfect program. They stressed that the one element which did remain constant in successful programs was a flexible, differentiated approach based on the specific needs of the gifted in the particular community or school.

A fourth step in Juntune's program planning was the staff development program. She called it the key to the success of the education of the gifted and talented. After the first two general awareness sessions for all staff members, an on-going training program was recommended. She suggested the general educators should meet a minimum of four times a year and the teachers responsible for direct services to the gifted and talented should meet monthly (Juntune). Connie House, in another article, went even further than this type of training. She suggested that a district's teachers should take at least two full three-semester courses in education of the gifted (House, 1980). One reason for this training was that for the majority of time, the gifted child would not be with the resource teacher, but with the regular classroom teacher. Special training would allow that teacher to know how to use the time to the child's best advantage.

Juntune's final steps in program development (screening, identification, program implementation, and evaluation) were or will be discussed elsewhere in this paper. However, she made very important points that should be listed here.

Though the models, strategies, organization and content may vary, quality programs incorporate the same basic principles into their plan.

1. Quality programming is built on a sound researched theoretical base.
2. Quality programming has a growth plan that allows for the integration of new ideas.
3. Quality programming is constantly being updated in accordance with recent research findings.
4. Quality programming has a built in evaluation plan.
5. Quality programming consists of content and activities that are justifiable.
6. Quality programming focuses on the needs of the individual student.
7. Quality programming allows for individual differences in learning style, rate and outcomes (Juntune, 1979:447).

Evaluation

Compared to some other topics in this paper, it was unusual that the literature on program evaluation was almost in full accord. Renzulli and Smith (1979) thought that evaluation should be an essential and ongoing part of total programming. Authors agreed that the purpose of evaluation was not to justify projects in order to receive more funds, but to contribute to improvements in instruction (Tuttle, 1979).

Tuttle also concluded that the program evaluator should be present when the program was developed. The objectives would be written in measurable terms or should cite the instrument which would be used in the evaluation of that objective (Developing Programs for the Gifted and Talented, 1978).

The government pamphlet writers also suggested that both cognitive and affective assessments should be made so that the program could be viewed from several perspectives. One of the Missouri projects mentioned an example of an affective evaluation tool. The district of Ritenour measured the children's development of a realistic self-concept and whether they could recognize their own special talents and abilities by a pre-post administration of the Piers-Harris Children's Self-Concept Scale (Katz and Obermeier, 1980).

Renzulli was sharp in his criticism of using behavioral objectives to measure programs for gifted children. They were inappropriate, he warned, because it forced developers to focus the objectives of the programs on lower level (basic) skills since they could be so precisely measured (Renzulli, 1980). The Texas teacher training manual was even more specific. It said it was not possible to demonstrate the effectiveness of a program by using pre- and post- achievement tests, by obtain-

ing unsupported opinions of persons connected with the program, by comparing the gifted children with other children at their grade level, or by showing that the gifted children scored any number of grade levels above their own chronological ages on achievement tests (Mallis and Heinemann, 1978).

Mallis and Heinemann continued by suggesting that teachers in the Texas programs use some of both objective and subjective devices listed below.

Objective

1. Use of a Yes-No scorecard on which are listed the various components of the program with a point system assigned to scores
2. A checklist completed by everyone originally involved in the design of the program relating directly to the goals and objectives
3. Tape recordings of discussions and presentations for a comparison of a child's developing verbal fluency or vocabulary
4. Films or videotapes of performances, projects, etc.
5. Sociometric records of changing patterns of social relationships
6. Twice-a-year observations of the class by trained observers with pertinent checklists or rating scales

Subjective

1. Anecdotal records kept by the teacher
2. Logs or journals kept by students
3. Comments on parent questionnaires about children's attitudes, reactions to what is going on in the program, and apparently unmet needs
4. A self-evaluation essay or checklist by each student in the group
5. A checklist of each student's study habits and work skills (Mallis and Heinemann, 1978:76).

Renzulli summarized this discussion on evaluation as he said,

Tests simply do not exist to tell us the amount of growth that takes place when a youngster's work is instrumental in changing a state law, stopping the construction of an environmentally unsafe interstate highway, producing an award-winning film, publishing a special-topic newspaper, or bringing about the erection of a monument at a place with important historical significance. These types of creative products are the right and proper types of data upon which our evaluations should focus. They may not be as precise and objective as scores on a standardized test; however, if we are to make any important breakthroughs in evaluation, the products of children

must be viewed as data. Our evaluations of such data may be more imprecise than test-score data; however, it is far better to have imprecise information about the right type of objective than precise information about the wrong objective (Renzulli, 1980:9).

In-Service Training

As was mentioned before in this paper, many of the writers encouraged the involvement of the entire staff of a district, both in the beginning stages of program development and as ongoing participants in training on how to work with the gifted in the regular classroom. Renzulli put it quite bluntly when he emphasized that a district would be deluding itself if it thought that a few hours a week in a special resource room began to meet the needs of the gifted. When proposals were written to request aid in setting up services for the youngsters, an important part of the rationale was that the regular curriculum did not meet their needs. If that were true, then the supplementary services would only be a part of the district's responsibility. The other part would be to encourage and train regular classroom teachers to modify the regular curriculum for those children (Renzulli, 1979).

Juntune wrote an encouraging article concerning a model teacher training program for developing creative thinking skills in students. They found that it was possible to modify classroom instruction through a systematic, research-based, teacher in-service program. Several teachers indicated a personal growth in creativity which led to permanent changes in teaching style and new ways of perceiving their students. Of course, the key to such a program's success would lie in the attitude toward change of the teachers and administrators involved (Juntune, 1979).

Gold (1979) suggested a practical reason for developing successful in-service training programs. According to data from the National

Center for Educational Statistics, not enough teachers and supervisors can be graduated soon enough to meet the needs of the gifted children already in the schools. He listed several possibilities for programs to train teachers to work with gifted and talented children. His list included summer institutes, visits to demonstration projects, area service centers, and technical assistance units. He commended the latter method because of the individualized prescription approach used. His enthusiasm was not as great as he mentioned other methods, such as workshops, classes and study groups, teacher institutes, administrative aid, individual reading, and informal exchange of ideas among teachers. He insisted, however, that the mode used to obtain background and skills through training was less important than the concepts, materials, biases, and other general information to be presented.

Teachers of the Gifted

Characteristics

It became obvious when seeking research studies on teachers of the gifted that there were not many studies. The names of the researchers who had done the few available became familiar as article after article quoted the same people. Getzels and Dillon lamented this fact when they said that what was needed was theory and research on specific teaching behaviors which are related uniquely to special effectiveness with gifted students (Getzels and Dillon, 1973).

The information obtained was mostly opinions of groups of people concerning the desired characteristics. Some of the groups surveyed were:

1. gifted adults in order to analyze the qualities of their

most influential teachers;

2. administrators to discover what kind of teacher they would hire for their gifted classrooms;

3. experts in the field of gifted education to investigate their ideas on teacher selection; and

4. gifted children who were asked with what kind of teacher did they learn best.

Other lists compared were from the United States Office of Gifted and Talented, from an administrator of a well-known school for the gifted, Calasancius (Gerencser, 1979), from other teachers and students, and from those who reviewed other literature.

Listing their suggestions and attempting to allow no duplications, this researcher counted thirty separate qualities. Yet almost all the qualities could just as well have been the same ones a person would list if characterizing any good or successful teacher. Tuttle quoted June Maker as highlighting three of them as most important: high intelligence, knowledge of subject matter, and emotional maturity (Tuttle, 1978). Two other characteristics were rated high: desire to work with gifted individuals and imagination or creativity. On this list, high intelligence would actually have been duplicated more times than any other quality. Although many experts in the field have said that a teacher does not have to be gifted to teach the gifted, Gallagher reminded his readers that such statements were not accompanied by evidence which indicated how many successful teachers of gifted children were of average intelligence. He thought common sense told educators that at least superior intellectual endowment was desirable before a teacher should consider working with groups of gifted children (Gallagher, 1959).

Three studies were informative. Lyon discussed a study by Aspy and Roebuck who found that teachers who possessed the quality of empathic understanding--that is, the ability of the teacher to put herself or himself in a student's shoes--had students whose achievement test scores were significantly higher than students who had teachers without empathic understanding (Lyon, 1981). Two other studies, discussed by Gold (1979), offered some insights, but were too flawed or limited for generalizations to be made from them. Gold complained that both studies were now more than a decade old and no others similar to them had been conducted. He thought more research and less opinions about the characteristics of teachers of the gifted were needed.

Preparation

In preparing a review of literature for the 1972 report of the United States Commissioner of Education to the Congress, a researcher concluded that there were more studies on the characteristics and behavior of successful teachers of the gifted than there were on their specific preparation (Gold, 1979). Realizing the dearth of material within the last section of this paper makes that statement even more revealing.

In a search conducted by Gold of college catalogs and of the professional literature, as well as extensive personal communications, he failed to identify more than three undergraduate training programs for teachers of the gifted. In a 1976 survey for graduate level programs, it was indicated that in the United States there were fewer than thirty institutions that offered programs at the master's level and that only about one-third of that number offered doctoral programs. In fact, 60 percent of the states did not at that time have a single sequential

degree program at any level for teachers of the gifted and talented. Obviously this is an area in which much progress needs to be made in the very near future.

Do Gifted Programs Make a Difference?

In the past, when evaluating gifted programs, the question of whether students might not have done as well in regular, unenriched classes was left unanswered. Attempts to reach a conclusion varied in procedure from survey questionnaires of students who had been in such a program, teacher opinion surveys, pre- and post-test scores and use of other test data. In 1959, Gallagher determined that it was not as yet possible to evaluate special programs in terms of their success.

However, in 1961, Simpson and Martinson, in a report to the California Legislature, documented a study of 929 gifted students in grades 1-12. They found that gifted students in special programs made significantly greater gains in academic achievement than gifted students in regular classes. The children in the special classes advanced an average of two academic years while the equally gifted ones in regular classes advanced only one academic year (Tuttle, 1978).

In addition, Tremaine did another study in 1978 which was extensively written up in *Gifted Child Quarterly* (Tremaine, 1979). This study compared the grade point averages, SAT scores, scholarship and honors obtained, and IQ scores of all seventy-four students in two particular high schools in California who had once been enrolled in special gifted courses or programs with those of all fifty-nine gifted graduates of the same schools who had never been enrolled. By means of a questionnaire received back from sixty enrolled respondees and forty-

one unenrolled respondees, she also attempted to measure attitudes toward education, society, peer groups, and the self, and to survey school and community activities and vocational and educational goals. The hypotheses for the study focused upon common criticisms of gifted programs to test the validity of those criticisms.

The results showed that definite academic benefits derived from the gifted programs were experienced by the enrolled graduates. It was revealed that the enrolled gifted students had higher educational goals and more regard for high school and teachers. They were more involved in school activities and equally as involved in community projects as the unenrolled. The study provided no data which would support the contention that gifted programs breed elitism, snobbery, indifference, conceit, or any other negative quality. Indeed, the study led to the conclusion that gifted programs do make a difference and that program development is worthwhile.

Summary

Chapter 2 has given an extensive review of the literature gathered in nine areas concerning programs for gifted children. The areas were: definitions of giftedness, programming for the gifted, identification of gifted students, defensible programs for the gifted, program development, evaluation, in-service training, teachers of the gifted, and do gifted programs make a difference.

This study was intended to poll the faculties of Missouri's gifted programs to determine the success of their respective programs. A detailed description of the procedures used in the study will follow in Chapter 3.

Chapter 3

DESCRIPTION OF THE PROCEDURE AND SOME FAMOUS PROGRAM MODELS

The purpose of this study was to ascertain from Missouri's staff of teachers of the gifted whether certain programs being used were more successful than others. Thus, two major questions were formulated. As previously stated in Chapter 1, they were:

1. Is there a specific type of program which most teachers of the gifted in Missouri feel is more beneficial to their students than any other?
2. Is there a major difference in philosophy between those working with gifted children from a resource room and those working with them in a regular classroom? How does the philosophy of the program administrator differ from these?

In reviewing the literature concerning the models being used in the many gifted programs throughout the United States, the researcher noticed that several specific models began appearing more frequently than others. These were Bloom's Taxonomy of Educational Objectives, Guilford's Structure of the Intellect, Williams' Model for Implementing Cognitive-Affective Behaviors in the Classroom, and Renzulli's Enrichment Triad Model. A brief summary of the characteristics of each follows.

Characteristics of Some Models

Bloom's Taxonomy of Educational Objectives

One of the most discussed learning theories in relationship to

gifted students is Bloom's Taxonomy. It actually is a classification system dealing with six levels of learning, each one higher than the last. Many classroom teachers concentrate mainly on Bloom's first three levels of learning.

1. Knowledge--recognition or memorization of information
2. Comprehension (cognition)--ability to translate or interpret the knowledge
3. Application--actual use of the knowledge by demonstration, such as solving math problems or making things

However, although intellectually gifted children should not ignore the first three phases, they could benefit more from emphasis on Bloom's last three levels.

4. Analysis--comparing the basic parts, ideas, or objects in order to draw generalizations or separate out the basic qualities
5. Synthesis--originating, integrating, and combining ideas into a plan, product, or proposal that is new or different
6. Evaluation--judging, disputing, and debating books, articles, television programs, speeches, or advertising (Hall and Skinner)

Guilford's Structure of the Intellect

The conceptual model that has undergirded much of the educational effort to measure and educate for creativity is Guilford's Structure of the Intellect (Guilford, 1959). A theoretical psychologist, Guilford was convinced that there are a number of dimensions of intellectual performance not measured by standard IQ tests--prominent among these, divergent thinking and evaluative thinking. An IQ test most often contains items which have one correct answer. The person being tested must narrow the subject under consideration to one appropriate

response, an example of convergent thinking. Guilford drew a clear distinction between this type of thinking and divergent thinking which includes characteristics of fluency, flexibility, and foresight. As new tests for creativity requiring divergent answers have been put into greater use, it has been discovered that youngsters who score very high on these tests are not always the same youngsters who score high on IQ tests.

Guilford created a model which displayed the different kinds of mental abilities believed by him to exist. It is a three-dimensional cube consisting of intellectual operations, products, and content. The category content provides the form in which the thinking will take place. Products shows the result of the thinking. The category intellectual operations concentrates on the means by which the product is reached (Gallagher, 1975).

If Guilford's Structure of the Intellect were to be utilized in the gifted classroom, the teacher would need to design practice exercises or direct a discussion toward the more complicated thought processes such as systems, transformations, and implications in the product category; divergent, convergent, and evaluative thinking from intellectual operations; and the figural and symbolic elements of the content category. Educators who design curriculum for the gifted should recognize the complexity of the thinking process, as explained by Guilford, and provide specific ways of fostering each component (White, 1978).

Williams' Model for Implementing Cognitive-Affective Behaviors in the Classroom

Frank E. Williams, an educational psychologist, designed another complex model, one meant to aid the teacher to modify tasks in the class-

room along the dimensions of curriculum, pupil behavior, and teacher behavior. One major difference in the Williams model is that it introduced an affective layer of student behavior to the usual cognitive layer. Thus, curiosity, risk-taking, complexity, and imagination were brought to the teachers' attention as dimensions to be worked with as well (Gallagher, 1975).

The model has three sides, labeled dimensions. Dimension One consists of six basic subject areas. Dimension Two pertains to strategies that teachers can use for presenting any of the curriculum areas. Dimension Three describes students' behaviors as the children interact with content and strategy. Williams said that with the help of this model, a teacher could have a great deal of flexibility within curriculum areas for teaching and learning (Williams, 1980).

The Enrichment Triad Model

Renzulli's three-step plan builds into its procedure several major objectives.

1. Students will have the opportunity to pursue their own interests to whatever depth and extent they so desire and in a manner consistent with their own preferred styles of learning.

2. The teacher's primary role will be to help students identify and structure solvable problems which interest him/her; aid the acquiring of methodological resources and investigative skills necessary to solve those problems; and find appropriate outlets for student products.

Renzulli's triad involves these three areas:

Type I Enrichment, called General Exploratory Activities. It consists of those experiences and activities that are designed to bring the learner into touch with the kinds of topics or areas of study in

which he or she may have a sincere interest.

Type II Enrichment, called Group Training Activities. It consists of methods, materials, and instructional techniques that are mainly concerned with developing the thinking and feeling processes. Renzulli recommended using a carefully developed system such as Bloom's Taxonomy or Guilford's Structure of the Intellect to serve as models in organizing these activities.

Type III Enrichment, called Individual and Small Group Investigations of Real Problems. It consists of activities in which the youngster becomes an actual investigator of a real problem or topic by using appropriate methods of inquiry. The child would have a final product in mind.

Renzulli felt that although all learners, gifted or not, could benefit from the first two types of enrichment described in his model, Type III was appropriate mainly for gifted students. This was true, he maintained, because "the very characteristics of giftedness suggest that a predisposition exists on the parts of certain students to initiate and follow through on more complicated types of investigative activity" (Renzulli, 1977:32). Renzulli suggested that approximately one-half of the time that gifted students spent in enrichment activities should be devoted to Type I I experiences.

Renzulli listed several assumptions underlying his model. He assumed that enrichment activities would mean experiences or activities above and beyond the regular curriculum. He acknowledged that there exist certain basic competencies all students should master, but that this should take place in as streamlined, exciting, and relevant way as possible. He also assumed that the enrichment activities, except for

some Type II activities, would show complete respect for the learner's interests and learning styles. If a student showed a sincere interest in a particular area, then he or she must be allowed opportunity to pursue topics therein to unlimited levels of inquiry (Renzulli, 1977).

Procedure

The review of literature and correspondence with writers in the field of gifted education revealed that there was a diversity of programs and no consensus on a best program. There were books and pamphlets written in which writers attempted to guide a committee in making an educated decision on which program was best for their community. Yet the field was so new that results from the programs in existence would not be compiled perhaps for years.

Some writers remembered the fickleness of the public in the past. Then, losing interest in the gifted programs, they had allowed lack of funding to close them down. These writers wanted sounder bases used for the current programs which would give a better chance for a successful outcome. Perhaps, with a hope for success, the public would not allow the past to repeat itself (Renzulli, 1980).

Missouri was one state which seemed to have taken its gifted programs seriously. The state special education law (H.B. 474), which had been enacted in 1973, gave the State Board of Education the power to establish standards for state aid for special programs for gifted students (Patterson, 1978). In addition, the State Department of Elementary and Secondary Education had created a section to work with gifted and alternative education programs and hired a director of that section. In the school year 1980-81, there were sixty-nine local programs being

funded in part by the state. As shown by a map of the state of Missouri with its gifted programs marked (Appendix C), quite a few programs have been developed in the urban fringe of the two major metropolitan centers of St. Louis and Kansas City. However, the remainder of the programs seem to be dotted throughout the rest of the state. Few programs, so far, have been developed in the Ozark Mountain area or in the northeastern and northcentral farmlands.

To answer the questions concerning the most successful gifted programs, a descriptive study was decided upon.

Descriptive research, sometimes known as nonexperimental research, deals with the relationships between variables, the testing of hypotheses, and the development of generalizations, principles, or theories that have universal validity. It is concerned with functional relationships. . . . The researcher doesn't manipulate the variables or arrange for events to happen. The method of descriptive research is particularly appropriate in the behavioral sciences, because many of the types of behavior that interest the researcher cannot be arranged in a realistic setting (Best, 1977:117).

It would not be likely that parents of gifted children would want to experiment in a controlled setting with the minds of their children. Therefore, a survey of the teachers of these children who already had been placed in a gifted program of some type seemed appropriate and would perhaps yield some answers.

The survey method gathers data from a relatively large number of cases at a particular time. It is not concerned with characteristics of individuals as individuals. It is concerned with the generalized statistics that result when data are abstracted from a number of individual cases (Best, 1977:118).

Frequency data, arrived at through a survey, though not as precise a measure of opinion as desired, would be used because currently there has been no more precise a measure developed. It is true that analysis of descriptive research limits any generalizations to the group of people surveyed.

The Instrument

The researcher decided to poll opinions in several main categories: the delivery system of a program (specifically whether a child should be worked with in his/her regular classroom or pulled out to another environment and a special teacher); the qualifications of teachers for the gifted; the grade span most recommended for programs; the in-service training needed for the entire faculty; the identification procedures most recommended for a child's entry into a program; the philosophy of the program (specifically, does a high IQ allow any child to participate in a program, whether responding to it or not, or should there be factors, excluding a high cut-off IQ, which should allow a child to have a turn at the gifted program's resources); the district's philosophy on the characteristics and needs of giftedness; the philosophy of the use of time and curricula in a resource room; their philosophy on acceleration; evaluation of a program; the use of specific models or processes within the program; the type of research that preceded the inauguration of the district's program; the identification procedures for placement into the program.

The survey questions were produced using a Likert method. Statements were gleaned from the literature about gifted children. According to the Likert method, the correctness of the statements were not important, but if they expressed opinions held by a substantial number of people, they could be used. There had to be an equal number of favorable and unfavorable statements concerning any particular point of view (Best, 1977). In this manner, an individual or group of individuals could be scored on the favorable or unfavorable view held concerning any statement or group of statements. In the final draft of the survey,

thirty-six statements were included in the Likert scale portion, half of them the negative counterpart of the other eighteen.

A question relating to certain well-known models and processes and one asking an opinion about delivery systems often used in gifted programs were incorporated as the final items in the survey. These thirty-eight questions were sent as three pages stapled together. A brief cover letter was also prepared to be addressed to the program administrator. It also contained five questions for the administrator in order to aid the researcher in understanding the philosophy of the district as related to pre-program research, identification criteria and re-evaluation of program participants, teacher qualifications, in-service for the entire faculty, and the district's attitude toward acceleration.

The completed survey was reviewed by two faculty members from the School of Education and Psychology of Southwest Missouri State University at Springfield, Missouri. They considered it to be a valid instrument and endorsed its use for the research described in this paper.

Data Collection

On March 6, an envelope was mailed to each of sixty-nine administrators whose names were on a list of Missouri's State-Assisted Programs for Gifted Students: 1980-81. Inside the envelope were three survey forms, and a request to pass one survey to a resource room teacher, one to a regular classroom teacher who had gifted children in his/her class, and to keep one survey form for him/herself (Appendix A). A deadline date of March 18 was included at which time all the surveys were requested to have been mailed back to the investigator. A stamped self-addressed envelope was also included.

By the end of March, only thirty-one envelopes had been received by the investigator. During the first week of April, administrators in targeted programs were phoned and surveys were requested. Through the process of phoning, it was discovered that some districts had received a letter from the director of gifted education in the Missouri Department of Elementary and Secondary Education encouraging them to decline participation in the study (Appendix D). The letter was mailed without any knowledge by the investigator that it had been or why it had been. It is suspected that there might have been a relationship between it and the number of surveys returned. In the final count, thirty-three program administrators responded and their data would be included in the results. Envelopes were not received from thirty-six districts (Appendix C).

In order to tabulate data from an instrument containing both favorable and unfavorable statements on a particular point of view, quantities were assigned each column so that a numerical response could be received from each question. For instance, if the statement supported the point of view that the investigator had found most frequently when reviewing the literature, agreement with that statement received a five or a four. Disagreement with it earned a two or a one. If the responder were undecided on the issue, a three was given. The opposite quantities were assigned for a statement which disagreed with the prevailing point of view in the literature read by the investigator (Appendix E). Thus, when tabulating responses, the higher the score for a group, the more nearly that group agreed with the point of view most frequently found in the literature. Predesigned tables had been set up to receive the data, which was then sent to the Computer Center at Southwest Mis-

souri State University. There the items on the tables were coded for computer analysis (Appendix F).

Several types of answers were needed from the calculation of data. What did the resource teachers as a group think about each question on the survey? How did the classroom teachers feel as a group? What were the administrators' opinions? How did the total number of respondents answer each question? Did few or many participants agree with the findings from the review of literature?

Treatment

The computer would deliver its information on the frequency data entered in terms of means, standard deviations, and cumulative percentages. The statistical package (SPSSV8) would be given to the computer by means of a card keypunched with the information from a computer sheet. The computer would then produce the data on a print-out to be analyzed.

Summary

Because the investigator lives in Missouri and because Missouri seemed to have begun a serious effort toward serving its gifted children in the public schools, it was decided to poll the faculties of Missouri's gifted programs concerning the success of their respective programs. A survey method, principally using a Likert scale, was chosen as the instrument, with frequency data to be the result. The analysis of these results comprises Chapter 4 of this paper.

Chapter 4

ANALYSIS OF THE DATA

The computer print-out derived from the survey results promised a wealth of information. The computer printed a mean for each question on the survey as well as categorized means for each subgroup--the teachers of the resource rooms, classroom teachers, and administrators of the gifted programs. Answers to the two major questions developed for the purposes of this study could then be attempted. Those questions were:

1. Is there a specific type of program which most teachers of the gifted in Missouri feel is more beneficial to their students than any other?

2. Is there a major difference in philosophy between those working with gifted children from a resource room and those working with them in a regular classroom? How does the philosophy of the program administrator differ from these?

Because the two questions from the statement of the problem are so broad and require some interpretation of the data, in the following section, the investigator will consider first the more specific questions posed in Chapter 1 of this paper. Their answers, in turn, may illuminate the broader questions from the statement of the problem.

The Specific Questions

1. Do most teachers/administrators acknowledge that gifted school children of all ages should be reached through a district's

gifted program?

The answer to this may be assumed from the results of number one and seven on the survey instrument (Appendix A). Table 1 shows the opinions of each group of respondents for those survey statements in terms of means.

Table 1
Mean Scores of Each Group of Educators
for Survey Statements 1 and 7

Type of Educator	$\bar{X}$ (Number 1)	$\bar{X}$ (Number 7)
Resource Teachers	2.97	3.65
Classroom Teachers	3.96	3.65
Administrators	2.96	3.21
Total Group	3.24	3.50

Classroom teachers, with a much greater mean score than the other two subgroups (number 1), agreed that a gifted program should quickly expand to all grades. Resource teachers and administrators did not reach a conclusion. On number 7, both teacher groups did not want to limit the main thrust of the gifted program only to grades four through eight. Administrators were undecided.

2. Are there specific qualities that differentiate teachers of the gifted from other good teachers?

Numbers two, three, eight, and nine on the survey form related to this issue. Table 2 shows the resulting means.

All three subgroups thought that giftedness in a teacher was not necessary to teach gifted children (number 2). Classroom teachers agreed

that high intelligence was not a major characteristic needed (number 8), although administrators and resource teachers appeared undecided on this statement.

Table 2
Mean Scores of Each Group of Educators for
Survey Statements 2, 3, 8, and 9

Type of Educator	$\bar{X}$ (No. 2)	$\bar{X}$ (No. 3)	$\bar{X}$ (No. 8)	$\bar{X}$ (No. 9)
Resource Teachers	2.29	2.23	2.97	3.16
Classroom Teachers	2.43	2.17	2.30	2.52
Administrators	2.14	2.57	2.82	3.29
Total Group	2.28	2.33	2.73	3.02

Both resource and classroom teachers believed that teachers of the gifted were no different than good teachers of all children, but administrators seemed more undecided about that issue (number 3). Yet when asked if there were certain characteristics differentiating good teachers from good teachers of the gifted (number 9), which was the previous question's opposite on the survey, both resource teachers and administrators showed greater mean scores than they had on the opposite. Although they were still in the undecided range, more of their members had changed their minds and answered positively. Many classroom teachers still thought there was no difference between good teachers, scoring a markedly lower mean score than the other two subgroups.

Question three on the administrators' cover letter added more information. They were asked what qualifications they looked for in teachers for their gifted program. Table 3 shows how thirty administra-

tors answered the question.

Table 3

Most Frequently Desired Qualifications for Teachers of the Gifted
Ranked by Percentages of Administrators Who Preferred Each

Qualifications	Percentages
Desire to work with gifted children	90%
Enthusiasm	86.7
Flexibility	80
Ability to use strategies to foster high levels of thinking	80
Ability to utilize innovative techniques	66.7
Ability to do individualization of curriculum	66.7
Teaching experience	63.3
Security within self	60
Special classwork in gifted education	43.3
High intelligence	36.7
Stamina	36.7
Extensive knowledge of subject area	26.7
Other ¹	6.7

¹Two administrators specified three other qualifications: 1. empathy; 2. the ability to facilitate learning; and 3. moving students within their own interests.

3. Is it necessary for the gifted program to have the cooperation of the entire faculty of a district, and, if so, is a strong in-service training program the best way to insure that?

To answer the question, statements five, six, eleven, and twelve were included in the instrument. Also, question four on the administra-

tors' cover letter gave added information.

Table 4

Mean Scores of Each Group of Educators for
Survey Statements 5, 6, 11, and 12

Type of Educator	$\bar{X}$ (No.5)	$\bar{X}$ (No.6)	$\bar{X}$ (No.11)	$\bar{X}$ (No.12)
Resource Teachers	4.35	2.48	3.42	4.03
Classroom Teachers	3.57	2.83	3.00	3.35
Administrators	3.78	3.07	2.96	2.93
Total Group	3.94	2.78	3.15	3.46

All groups, and resource teachers to a markedly greater degree (number 5), felt that teachers working with gifted children in their mainstream class needed to have special training and a willingness to have a gifted child in the classroom. However, when asked if each classroom and teacher should receive bright children equally and indiscriminately (number 11), the answers were quite divided. Resource teachers again gave a positive response to requiring two workshops for the entire faculty before beginning a district's gifted program (number 12). They were extremely different in their answer from the administrative group's answer. Yet they retreated from their strong position on number six. They thought it would be more effective to designate several teachers as teachers of the gifted rather than try to provide in-service training for all teachers in the system. The classroom teachers and administrators were undecided as a whole on this issue.

Of the thirty administrators who answered the question on whether or not their districts actually held in-service training for the entire

faculty prior to the beginning of the gifted program, ten responded with a yes (33.3 percent), and twenty (66.7 percent) said no.

4. Do the regular classroom teachers of gifted children encounter problems with certain gifted program models, and, if so, are there ways to minimize the problems?

The answer to this question may in part be assumed from statements four, ten, and thirty-seven. Table 5 shows the groups' opinions concerning statements four and ten.

Table 5
Mean Scores of Each Group of Educators
for Survey Statements 4 and 10

Type of Educator	X (Number 4)	X (Number 10)
Resource Teachers	4.32	2.94
Classroom Teachers	3.52	2.43
Administrators	4.00	2.75
Total Group	3.99	2.73

Classroom teachers assumed that a gifted child could be adequately mainstreamed with no special class if individualization were used and help with resources was available (number 10). Resource teachers and administrators seemed not so sure. However, administrators and resource teachers responded more strongly when asked if some classroom teachers felt unqualified and frustrated when working with gifted children even if outside help was available (number 4). They indicated a yes, and their response in comparison to the more divided classroom teachers' response was noticeably greater.

Perhaps evidence of what models the teachers and administrators felt most comfortable with could be ascertained by studying Table 6, a composite of answers to number thirty-seven on the survey. The respondents ranked the types of gifted programs in order of best to worst, using their own experience, opinions, and/or research. The legend appears below the table and contains the complete meaning of the abbreviated terms.

Table 6

Types of Delivery Systems for Gifted Programs Ranked from Best to Worst by Each Group of Educator*

Rank No.	Type of Educator			
	Resource	Classroom	Administrator	Total
1.	Four to One	Pull Out Daily ²	Four to One	Four to One
2.	Sev Times Wk	Sev Times Wk	Pull Out Daily	Sev Times Wk
3.	Pull Out Daily	Four to One	Sev Times Wk	Pull Out Daily
4.	Mentor	Mentor	Mentor	Mentor
5.	Mini Courses	Resource Aid	Resource Aid	Resource Aid
6.	Resource Aid	Sep Class	Mini Courses	Mini Courses
7.	Summer Courses	Mini Courses	Sep Class ²	Summer-Courses
8.	Before/After	Before/After	Summer Courses	Sep Class
9.	Sep Class	Summer Courses	Before/After	Before/After
10.	Acceleration	Acceleration	Acceleration	Acceleration

²This was ranked the same as the one below it.

*Legend

Acceleration--early entrance, rapid movement through subjects, grade skipping

Sep Class--separate self-contained class
 Four to One--regular classroom four days, gifted class fifth day
 Pull Out Daily--pulled out of regular class once each day
 Sev Times Wk--pulled out of regular class several times a week
 Resource Aid--resource teacher aids regular teacher with materials to
 use with her gifted students
 Mentor--mentor program
 Before/After--program before or after school
 Summer Courses--summer program
 Mini Courses--mini courses

5. If a program model relied on a regular classroom teacher for primary identification of children to receive the benefit of the resource room, would the regular teacher feel and be capable of that responsibility?

Statements fourteen and fifteen related to this question. Table 7 shows the results from the survey.

Table 7

Mean Scores of Each Group of Educators
 for Survey Statements 14 and 15

Type of Educator	$\bar{X}$ (Number 14)	$\bar{X}$ (Number 15)
Resource Teachers	4.10	2.48
Classroom Teachers	4.00	3.21
Administrators	3.96	2.79
Total Group	4.02	2.79

It seemed that all groups were willing for the resource room teacher to aid the classroom teacher in enrichment activities to identify children for the resource room (number 14). Yet, on number 15, the resource teachers mistrusted the ability of the classroom teachers to identify giftedness in the form of creativity, achievement, and interest

or ability in a subject area. The classroom teachers and administrators were divided on the issue.

6. From past experience, is a cut-off IQ range an adequate determiner of children for a gifted program, or would it be more helpful to lower the IQ requirement and use it in conjunction with other factors, such as creativity and commitment to a task?

Six statements from the instrument might aid in answering this question. They are numbers sixteen, seventeen, nineteen, twenty, twenty-two, and twenty-three. Table 8 shows their mean scores.

Table 8

Mean Scores of Each Group of Educators for Survey
Statements 16, 17, 19, 20, 22, and 23

Type of Educator	Mean Scores of Statements					
	<u>16</u>	<u>17</u>	<u>19</u>	<u>20</u>	<u>22</u>	<u>23</u>
Resource Teachers	3.19	4.32	4.61	3.06	1.68	3.26
Classroom Teachers	3.30	4.22	4.26	2.74	2.17	3.39
Administrators	3.04	4.21	4.36	2.96	1.89	3.32
Total Group	3.17	4.26	4.43	2.94	1.89	3.32

The child with a high IQ who is lazy or a classroom discipline problem was a source of indecision to the three faculty groups. Each group was divided as to whether or not that child belonged in a gifted class (numbers 16 and 20). All three groups, however, agreed that some children were good test-takers, though not necessarily good students within the classroom (number 22), and some children seemed to be perfect candidates for the gifted program until their IQ was tested and it was

too low (number 17). The groups indicated their common belief that many criteria besides IQ tests and standardized achievement tests should be used to identify a gifted child (number 19). Yet, none of the groups could decide whether to stop or continue placing children in a gifted program according to the cut-off IQ (number 23).

Table 9 shows the criteria for placing a child in a gifted program in the thirty districts whose administrators responded to question two on the survey cover letter.

Table 9

Most Frequently Used Criteria for Placement in a Gifted Program
Ranked by Percentages of Districts Which Used Each

Criteria	Percentages
Teacher recommendation	100%
Above a specific IQ (individual test)	93.3
Certain achievement test scores	93.3
Parent nomination	66.7
Above a specific IQ (group test)	43.3
Peer nomination	20
Past performance (or grades)	20
Self-nomination	13.3
Other ³	13.3

³Six administrators specified other criteria. Those mentioned were: parent inventory, interview with child, creativity test, Renzulli scales (learning, motivational, creativity), and pupil products (creative writing, problem-solving).

7. Can one assume that gifted children are basically the same in their development as other children, but perhaps merely precocious in

it? If this is so, does this dictate a need for them to be provided a different learning style, a different environment, different content, or faster rate?

Answers to this question were suggested by responses to numbers twenty-one, twenty-four, twenty-five, and thirty-one on the survey.

Table 10 shows these responses.

Table 10
Mean Scores of Each Group of Educators for
Survey Statements 21, 24, 25, and 31

Type of Educator	$\bar{X}$ (No.21)	$\bar{X}$ (No.24)	$\bar{X}$ (No.25)	$\bar{X}$ (No.31)
Resource Teachers	3.03	3.55	2.32	2.68
Classroom Teachers	3.00	3.22	2.00	2.43
Administrators	3.21	3.21	2.36	2.29
Total Group	3.09	3.34	2.24	2.48

When asked if gifted children were different from other children, even those older than they, in their stages of learning and development, all three groups responded that they were undecided (number 21). On the second such question, modified slightly (number 24), the resource teachers tended to think gifted children were different.

The issue of what to teach them proved to be an area of agreement. All three groups felt that gifted children basically needed to learn the same things as non-gifted children although perhaps at a different rate (number 25). Classroom teachers and administrators did not think a modified content which non-gifted children did not receive should be offered to gifted children (number 31). However, the resource teachers were not

sure of their opinions on that question.

According to item thirty-eight on the survey instrument, resource teachers did use specific models or processes for their classes which classroom teachers did not. Table 11 shows the percentages for the two groups.

Table 11

Most Frequently Used Models for Gifted Programs Ranked by Percentages of Teachers Who Have Used Them

Gifted Program Models	Types of Teachers	
	Resource Teachers	Classroom Teachers
Bloom's Taxonomy	100%	90%
Renzulli's Triad	86.7	30
Guilford's S.O.I.	46.7	40
Williams' Model	46.7	0
Other ⁴	20	0

⁴Five resource teachers and one administrator specified other models they would recommend. Listed were: Parnes Creative Problem-Solving, Torrance's test and ideas, Productive Thinking Program, Creativity Teaching (fluency, elaboration, flexibility, originality), Models of Teaching--Joyce, et.al., and Roger Taylor. Parnes was mentioned three times.

8. Would the best use of a gifted resource room be to identify a limited number of children who would receive benefits for one school year, or to develop a talent pool from which children could be chosen for participation as their strong interest in a topic is discovered?

Responses to this question were evaluated from statements thirteen and eighteen on the survey form. Table 12 shows the means which resulted from tabulating the answers of the three groups.

Table 12
Mean Scores of Each Group of Educators
for Survey Statements 13 and 18

Type of Educator	$\bar{X}$ (Number 13)	$\bar{X}$ (Number 18)
Resource Teachers	3.35	2.48
Classroom Teachers	3.70	2.65
Administrators	2.93	3.04
Total Group	3.30	2.72

Resource teachers seemed to favor their students participating in the gifted class for a whole school year (number 18), but classroom teachers and administrators were indecisive. However, classroom teachers indicated their desire to recommend children for turns in the resource room when their interest in a particular subject was high (number 13). Administrators and resource teachers had no strong opinion on the issue. The difference between the greatest and smallest means on that statement was a large one.

Fifty percent of the administrators signified that they did periodically reevaluate a child in their gifted programs. Whether it was yearly or more or less frequently was not indicated.

9. Would the best use of a resource room teacher's talents be as a teacher of a whole class of gifted students utilizing a certain type of curriculum, or as an instrument to further each individual child's interest in a particular topic or project?

Answers to this question came from statements twenty-six, twenty-nine, thirty-two, and thirty-five. Table 13 shows the mean scores of

each of these statements.

Table 13

Mean Scores of Each Group of Educators for
Survey Statements 26, 29, 32, and 35

Type of Educator	X (No.26)	X (No.29)	X (No.32)	X (No.35)
Resource Teachers	1.97	4.45	4.35	2.26
Classroom Teachers	2.22	4.39	4.13	2.30
Administrators	1.96	4.18	3.96	2.32
Total Group	2.04	4.34	4.16	2.29

All three groups agreed that a good enrichment program should have sequence, direction, and ultimate goals and should be developed with particular students in mind (number 32). They agreed that the resource room should be highly individualized with many learning centers and independent projects. The teacher should be a guide to learning and a true resource (number 29). But they also felt that the resource teacher should at times teach the children as a group with all of them working on the same curriculum (number 35) created perhaps by an author who had not known the particular children in that class (number 26).

10. Since gifted children are capable of doing higher process thinking, yet are highly product-oriented, should the gifted program have as its major goal the teaching of learning processes or the encouraging of an individual's products?

Statements twenty-seven and thirty-three may indicate the groups' opinions on this question. Table 14 shows their responses in terms of mean scores.

Table 14
Mean Scores of Each Group of Educators
for Survey Statements 27 and 33

Type of Educator	$\bar{X}$ (Number 27)	$\bar{X}$ (Number 33)
Resource Teachers	2.87	2.06
Classroom Teachers	2.52	2.00
Administrators	2.61	2.07
Total Group	2.68	2.05

All three groups had similar thoughts on the product versus process issue--that is, whether a gifted program should emphasize the children's products or should have as a main goal instead, teaching the process of learning. The groups were undecided, on number 27, if the gifted program should be product-oriented, but on number 33, all definitely felt the program should be process-oriented and that gifted children should be taught the way learning is accomplished.

11. Should regular teachers of gifted children strongly be encouraged to compact curriculum for them so that not only will they have time to participate in the program but they can cover curriculum material at a pace appropriate for their ability levels?

The opinions on this question were based on responses to statements twenty-eight and thirty-four. Table 15 shows those responses.

When confronted with a statement that acceleration of gifted children should not be done because it was impractical, disruptive, and could cause social and emotional problems later (number 28), the three groups reacted with indecision. However, the group of administrators

were nearest to agreeing with the statement, and their mean score was markedly lower than the scores of the teachers' groups. Yet a statement that gifted children needed a combination approach of acceleration in basic skills and enrichment to broaden thinking resulted in agreement by all three groups (number 34).

Table 15
Mean Scores of Each Group of Educators
for Survey Statements 28 and 34

Type of Educator	$\bar{X}$ (Number 28)	$\bar{X}$ (Number 34)
Resource Teachers	3.42	4.23
Classroom Teachers	3.26	4.09
Administrators	2.61	3.79
Total Group	3.10	4.04

Administrators were polled by use of question five on the cover letter to allow the investigator to find out if their districts would consider any form of acceleration of gifted students. One district's administrator acknowledged that his/her district would consider all forms mentioned. Twelve districts (40 percent) would allow no acceleration. Other percentages from the thirty respondents are shown in Table 16 on page 68.

It appeared that the highest percentage of districts accepted a form of acceleration in which students earned college credit for high school work. Only the one district whose administrator reported that they allowed all the forms of acceleration mentioned on the survey accepted early entrance to kindergarten. Also low in approval were the

placing out of certain courses by examination, combining two years' work into one, and taking extra courses or summer sessions to shorten total time in school.

Table 16

Forms of Acceleration Allowed by School Districts Ranked by
Number and Percentage of Districts Allowing Each

Forms of Acceleration	# Positive Responses	Percentages
Earning college credit for high school work	13	43.3%
Skipping a course or grade	8	26.7
More rapid movement through subjects	7	23.3
"Placing out" of certain courses by examination	3	10
Combining two years' work into one	2	6.7
Taking extra courses or summer sessions to shorten total time in school	2	6.7
Early entrance to kindergarten	1	3.3

12. Are behavioral objectives an adequate way to evaluate a gifted program's student goals or should there be instead other measures, such as the children's creative products or student-teacher questionnaires?

Statements thirty and thirty-six may be used to evaluate the opinions of the groups on this issue. Table 17 shows the responses to the statements.

Evaluation of the program seemed to be an undecided issue for these groups as seen by the mean scores for both statements. No group had a definite opinion concerning behavioral objectives (number 36).

The resource teachers were also not sure about the advisability of using the children's creative products or student-teacher questionnaires (number 30). Classroom teachers and administrators, however, seemed to be slightly favorable to using children's products and questionnaires.

Table 17

Mean Scores of Each Group of Educators
for Survey Statements 30 and 36

Type of Educator	$\bar{X}$ (Number 30)	$\bar{X}$ (Number 36)
Resource Teachers	3.29	3.00
Classroom Teachers	3.57	2.91
Administrators	3.50	2.68
Total Group	3.44	2.87

The Broader Questions

1. Is there a specific type of program which most teachers of the gifted in Missouri feel is more beneficial to their students than any other?

The following analysis will be drawn from the responses of the resource teachers only to the previous section's specific questions. The resource teacher group is the only group used because, by the definition stated in Chapter 1 of this paper, that group is considered to be the teachers of the gifted. The above question does refer only to teachers of the gifted.

In analyzing the responses of the resource teachers, it would be safe to assert that there is no one type of program upon which they, as

a group, would agree. They did not conclude that gifted children could be adequately mainstreamed with no special class, but neither did they decide that the children could not. Teachers of the gifted favored a combination of enrichment and acceleration, but could not make a direct statement on acceleration itself.

As to the type of program for their district (Table 6), the resource teachers' experience or research caused them to favor taking children from the classroom once a week for all day, or several times weekly for shorter periods, or once a day, in that order, above all other plans mentioned in the survey. Resource teachers placed noticeably lower than did classroom teachers and administrators the using of resource teachers to aid the regular teacher with materials. The last two choices of resource teachers for the type of gifted program a district should have were a separate self-contained class and acceleration. The self-contained choice was markedly different from that of the classroom teachers who placed it sixth on their list.

When questioned on what type of content should be taught to gifted children, resource teachers wished to teach basically the same material as used for non-gifted children, perhaps at a faster rate. Moreover, these teachers were not, as a group, certain whether modified content was appropriate. Yet they had used famous authors' models and processes with their classes to a greater extent than had regular classroom teachers.

On the statements related to learning styles--specifically, whether children should be worked with individually or as a group, resource teachers agreed with the individualization of interests and projects, but retained the idea of a total class at times working on a single subject.

2. Is there a major difference in philosophy between those working with gifted children from a resource room and those working with them in a regular classroom? How does the philosophy of the program administrator differ from these?

Each group's total mean was calculated by adding the means together and dividing by thirty-six, which was the number of items involved. The results follow in Table 18.

Table 18

Mean Scores of Each Group for All Statements on the Survey

Type of Educator	$\bar{X}$ (All 36 Statements)
Resource Teachers	3.19
Classroom Teachers	3.09
Administrators	3.05

The figures indicate that almost no difference existed between any of the three groups concerning their responses to the thirty-six statements on the survey instrument. Therefore, no major difference in philosophy between the three groups--resource teachers, classroom teachers, and administrators--existed as measured by this survey.

However, there may be another aspect to consider. When tabulating mean scores, in order to arrive at a positive result (3.50-5.00) or a negative result (1.00-2.49), members of a group to a large extent had to agree with each other's answers. When the group's members were undecided on a statement or when about the same number disagreed as agreed on the item, the mean would appear as 2.50-3.49, or undecided as a response. Thus, another aspect is within each group, how many times did

the members agree with each other so that they presented a positive or a negative answer rather than an undecided one?⁵ Tables 19 and 20 show the results.

Table 19

Number of Definite and Undecided Opinions
Expressed by Each Group of Educators

Type of Educator	# Definite Opinions	# Undecided Opinions
Resource Teachers	21	15
Classroom Teachers	22	14
Administrators	18	18

As can be seen, both groups of teachers presented a few more definite opinions than did the administrators. That is, they agreed with each other's answers a few more times.

Table 20

Percentages of Positive and Negative Responses
Given by Each Group of Educators

Type of Educator	% Positive Responses	% Negative Responses
Resource Teachers	53%	47%
Classroom Teachers	55	45
Administrators	56	44

As shown by Table 20, of the definite opinions given by all three

⁵It should be noted that a positive designation in this study was given to opinions which seemed to agree with ones most frequently found in the literature.

groups of educators, the administrators amassed a slightly higher percentage of positive responses than did the teachers' groups. The resource teachers had the smallest percentage of positive responses.

Summary

The results of the survey taken among the teachers who are responsible for the resource room activities, the teachers who teach a mainstream class in which gifted students are enrolled, and the administrators who direct the gifted programs for their districts were very similar. In the next chapter, the investigator reaches some conclusions as to the reasons for those results.

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

This study was undertaken in the belief that for years, public education has neglected one important segment of its population, the future leaders of the country, its gifted children. Even with the recognition of the need over the last few years, the field was still new, and research was limited. Few states even had university programs to educate teachers in the unique needs of bright youngsters. With so few research-proven guidelines, one might wonder how best to operate a creative and beneficial gifted program that would make a difference in the lives of those children it served.

With that background in mind, two questions were developed whose answers might add to the field's knowledge, particularly in the state of Missouri.

1. Is there a specific type of program which most teachers of the gifted in Missouri feel is more beneficial to their students than any other?
2. Is there a major difference in philosophy between those working with gifted children from a resource room and those working with them in a regular classroom? How does the philosophy of the program administrator differ from these?

Summary of the Procedure

Since a descriptive study had been decided upon, a survey instrument was developed using a Likert method. In the final product, thirty-

six statements of the Likert type were included; thus half of them were the negative counterpart of the other eighteen. Two additional questions to determine the experience of the respondents with models or processes in gifted programs, and their opinions of the various types of delivery systems, completed the survey portion. A brief cover letter, which asked the program's administrator a few questions about the district's philosophy, was placed with the survey form.

These items were mailed to the sixty-nine administrators of Missouri's state-assisted gifted programs. As completed forms were returned, answers were assigned numerical symbols, so that a computer could tabulate the results. In that way, answers from three groups could be analyzed, those from the teachers assigned to the gifted resource rooms, classroom teachers of children identified as gifted, and administrators of gifted programs.

Summary of the Literature

The literature reviewed for this study seemed to be encouraging in at least two respects. First, there are evidently gifted people writing and working on the subject of gifted education. Secondly, recent studies concluded that some gifted programs have made a difference in the education of gifted children.

Writers suggested that since there was no conclusive definition of giftedness, each study should specify the one it used and care should be taken in comparing different studies. Three types of programs were referred to, those of acceleration, grouping, and enrichment. More evidence was available in favor of acceleration than of the other two, yet acceleration was the least practiced device for educating the gifted.

Within the programs, several types of delivery systems were used. Each school district must decide how best to organize, schedule, and arrange its services so that the children are identified and helped. Kindergarten is not too early to begin. High school dropouts often were found to have an IQ considered in the gifted range.

How to identify the children to be served had not yet been resolved in the current articles. Many writers thought a cut-off IQ score was not adequate. Several writers were suggesting innovative plans to identify and select children. The United States Office of Education recommended multiple criteria, but continued a cut-off IQ as one standard.

There were many articles in the literature on how a district should proceed to set up a quality gifted program. There were several excellent innovative programs suggested. All writers researched for this paper emphasized that there was no perfect program for all students. Evaluation for the programs was necessary for improvements in instruction, but many writers criticized techniques such as behavioral objectives as being inappropriate to the type of program they were used to measure.

Writers decried the dearth of institutions for training teachers of the gifted. Because of that lack, in-service training of teachers was considered even more important. Yet training just of the resource room teachers was not sufficient, because the classroom teachers who worked with the gifted children most should be expected to modify the regular curriculum so that it too met their needs.

Although few studies had been done to separate the qualities needed for a successful teacher of the gifted from those of any good teacher, several characteristics were more frequently listed than others. These were:

1. high intelligence
2. knowledge of subject matter
3. emotional maturity
4. desire to work with gifted children
5. imagination or creativity
6. empathic understanding

One author emphasized, however, that more research and less opinions about the characteristics of teachers were needed.

Summary of the Findings

The Classroom Teachers

The classroom teachers had the most definite opinions of the three groups, agreeing with each other twenty-two out of thirty-six times. They felt that a gifted program should expand to all grades as soon as possible. Multiple criteria should be used to identify gifted children. Some children were good at taking IQ and achievement tests but not good in the classroom. Conversely, good students often did not do well enough on tests to be identified as gifted.

Concerning programming, the classroom teachers thought gifted children could be adequately mainstreamed without a special class if the regular teacher had help with outside resources. They experienced frustration at their lack of time or felt unqualified to provide an individualized program for the children, however. They would like to have the resource teacher help with their enrichment activities so that they could identify gifted children more easily. And they would like to be able to send children to the resource room when the children showed unusual interest in a subject.

The classroom teachers did not consider high intelligence nec-

essary to teach gifted children. Good teachers and good teachers of the gifted possessed similar characteristics. To have a gifted child in the classroom, a teacher needed training for it and a willingness to do it.

Gifted children needed basically the same curricula as non-gifted ones did. A combination approach of acceleration and enrichment should be tried. An individualized program should be planned for each student, but periodically all children could work on the same topic at the same time. A major goal would be to teach gifted children the way learning is accomplished. Their creative products or student-teacher questionnaires would be an adequate method of evaluation.

The Resource Teachers

Resource room teachers agreed with each other twenty-one out of thirty-six times. They felt that a gifted program should not be limited to grades four through eight, as it frequently is. Gifted children should be identified by multiple criteria, not just a cut-off IQ score, since some lesser students do well on IQ tests and some fine students make poor showings. Resource teachers were not confident of classroom teachers' abilities to identify gifted children.

Resource teachers thought that classroom teachers were often frustrated in their lack of time to work with gifted children individually and might even feel unconfident in their ability to work with them. They were willing to assist the classroom teacher with enrichment activities in order to identify more easily that teacher's gifted children. They favored keeping a child in the gifted program for at least one school year.

The resource teachers were not willing to state they should be gifted to teach gifted children. In fact, they thought there was no

difference between good teachers and good teachers of the gifted. They agreed that to have a gifted child in the classroom, that teacher needed training and the desire for that task. They favored at least two workshops for the entire staff of a district before beginning a gifted program, but thought it might be more effective to train several as resource teachers than to train all.

Resource teachers suspected that gifted children were different than others in their stages of learning and development. Yet they favored teaching them basically the same material as other children received. In the classroom, they thought both acceleration and enrichment should be utilized. The curriculum should be individualized and planned with each particular student in mind. However, they reserved the right periodically to teach all their students the same topic or skill, or use material written by another person. A major goal of the gifted program would be teaching the way learning is accomplished.

Administrators

Administrators agreed with each other on half of the questions. They would not limit a gifted program only to grades four through eight. They thought the use of multiple identification criteria to be helpful, since they recognized that in a classroom there were good test-takers and poor ones, thus giving at times invalid results from IQ score identification procedures.

Administrators observed the feeling of unconfidence and frustration of classroom teachers in working with gifted children. They favored having resource teachers assist regular teachers with enrichment activities to identify gifted children more easily.

Administrators did not consider giftedness a quality needed to

teach gifted children. They saw no difference between good teachers and good teachers of gifted children. They recognized the need for training a classroom teacher who was willing to teach a gifted child before the teacher took the child.

Administrators thought that gifted children needed basically the same curricula as non-gifted ones did. They saw no reason to use modified content with them. They favored combining acceleration and enrichment. An individualized program should be planned with each particular student in mind, but periodically the children could work as a group on the same project. The project might be planned by the resource teacher or taken from a commercial source. To teach the children how learning is accomplished should be a major goal of the program. Evaluation could be adequately conducted by using such data as the children's creative products or teacher-student questionnaires.

Interpretation of the Data Analysis

Although an anonymous written survey would seem to give no possibility for discussion, twenty-seven of the eighty-two respondents did not allow that to happen. They added comments all over their three sheets explaining why they chose the answers they did. Reading their interpretations of the statements greatly aided this investigator in analyzing the results of the data.

On number one of the survey (Appendix A), six people indicated that they objected to the use of the word quickly and for that reason disagreed that a gifted program should expand to all grades no matter where it is begun. It seems possible that wording rather than concept caused the mixed response. On its negative counterpart, number seven,

some respondents would like a gifted program at all levels but high school. They felt students may elect challenging classes there.

Concerning the questions about a teacher of the gifted needing high intelligence, it is perhaps false humility or lack of awareness of their own IQ's by the teachers of the gifted which caused them to deny their need for high intelligence. As one correspondent put it, "You don't have to be gifted to teach gifted children, 'but it helps'." Few administrators looked for giftedness, possibly because it would be difficult and/or time-consuming to get IQ scores on teacher candidates. IQ scores are also frequently misunderstood. Personnel problems could arise from hiring or not hiring on the basis of such scores.

When faced with the thought of requiring two workshops of all district teachers, administrators, and counselors, several who corresponded thought two was impractical. One workshop was more realistic. Knowing the difficulty of training those who are not interested in a subject, resource teachers indicated it might be more effective to designate a small number as teachers of the gifted rather than try to train all in the system. Of course, another reason for their answer to this statement might have been that they liked their jobs and viewed a negative response as threatening.

There seemed to be mistrust on the part of some resource teachers for the classroom teachers' abilities to work with gifted students. There was a strong positive response when commenting on whether the classroom teachers felt unqualified and frustrated as they taught brighter children. They also doubted the ability of classroom teachers to identify giftedness in the form of creativity, achievement, and interest or ability in a subject area. On question thirty-seven, resource teach-

ers ranked aiding the classroom teachers with materials to use with their gifted students far below what the other two groups did. Written comments on the returned surveys added to the impression of mistrust. The reason behind this again might be the lack of adequate gifted education training for the entire faculty.

The corresponders provided the most interesting, yet confusing, responses when they attempted to explain answers to statements twenty-five and thirty-one on the survey. These statements were intended to be opposites. Number twenty-five said that gifted children basically needed to learn the same things as non-gifted children although perhaps at a different rate. All three groups of respondents agreed to that, but comments were added, such as, "plus more and different things," "statement true but incomplete," and "agree if you add depth to rate." Observing these answers, one would think that number thirty-one, which stated that gifted children needed modified content which non-gifted children did not need, would be answered positively. Yet no groups did. Many individuals who agreed did so after crossing out the last five words about non-gifted children. The best explanation this investigator could think of for this discrepancy was that the respondents did not possess a clear philosophy about the difference between gifted and non-gifted children and thus, their curriculum needs. It seemed (on numbers 21 and 24 of the survey) that they were saying there might be no difference between the two groups of children. A strong question might be made to those people as to why then a special program was being provided.

The survey statements that related to which children actually belonged in a gifted program were inconclusive. Children with high IQ's were not always good workers, so the respondents did not know whether

they belonged in a gifted program or not. Renzulli's revolving door plan (explained in Chapter 2, page 24, of this paper) was hinted at in statement number thirteen, yet they were undecided about that plan as well. Again the respondents did not seem to have similar philosophies, even among the separate groups.

The groups indicated their common belief that many criteria besides IQ tests and standardized achievement tests should be used to identify a gifted child. Yet none could decide whether to stop or continue placing children in a gifted program according to a cut-off IQ. Several writers in the literature suggested innovative plans to identify and select children. But although the United States Office of Education recommended multiple criteria, they continued a cut-off IQ as one standard. Finally, it is they to whom state program developers look when deciding what criteria to require for their state's program. As one respondent wrote when referring to the mention of Renzulli's revolving door plan, "At this time, state guidelines do not allow this." There is an alternative student selection option written into the guidelines (Administrative Manual and Guidelines: State-Assisted Program for Gifted Students, 1980), but it would require a planner who had researched other options and was uncomfortable with the state's traditional ones.

On the surface, the seeming contradiction about whether a resource teacher should have the room completely individualized with plans directed toward each particular child or whether a teacher should lead an entire class in enrichment curriculum written by an outside source appeared to show another lack of philosophical understanding. And perhaps it did. Another possibility, however, was that the respondents were thinking about group discussions led by the teacher, or enrichment exper-

iences, such as field trips or visiting speakers. This type of group activity could lead to children discovering their individual interests and might then not be contradictory to the individualization issue. Personal interviews with each respondent could have cleared up this question.

Each district's approach to the acceleration issue was interesting. It seems to show many of them relying on opinions which were not research-based. Gallagher (1979) attempted to explain the ambiguous position in which educators find themselves. They have set up gifted programs because in the future, society will need excellent people to solve the energy, pollution, medical, economic, and other problems it faces. Yet within those gifted programs, many are careful not to give what looks like special treatment. Egalitarianism is rooted strongly in this nation. Even gifted programs seem to enforce equality.

It was an interesting fact that resource teachers did not agree with the research literature as much as the other two groups did. Moreover, they agreed with it only 53 percent of the times when they produced a definite directional response. It would seem to be to the advantage of the resource teachers to read the literature in the gifted education field and to keep abreast of the research findings. This is especially true since there are so few university courses being offered in the field and the in-service training has been limited.

Conclusions

This study was begun with the idea that there might be one program which was best for teaching gifted children. The reason why so many districts were not serving their bright students might be because they

did not know the best program to use. The decision to determine which programs were favored most often by school districts in Missouri was made in part because of the necessity to limit the study to manageable bounds. During the time it took for the study to be completed, many discoveries were made and conclusions reached.

One surprising outcome was the low percentage of returns from the mailed surveys. Thirty-three of the sixty-nine program administrators replied. That is, almost half returned the envelopes. Yet each envelope should have contained three survey forms. Eighty-two of the 207 surveys were received, or 39.6 percent. Most envelopes were received from the smaller districts, not the larger ones who employ several resource teachers, many classroom teachers, and usually have an administrator whose job may be limited to special services. It may be true that the programs, being new, are receiving many requests for information from researchers. For them, it may have become a question of priorities. However, it is difficult to see how research on gifted programs is to be gathered without their participation.

Since this study was begun, the state of the economy in the nation has worsened, and it is possible that some special programs will no longer receive federal or state aid. For the gifted child, this is unfortunate. Some say, can the regular classroom teacher not provide the extra? One author commented,

Many can and do, but the majority are overburdened with directing the learning of all the other students including the handicapped, now being mainstreamed. The result is the bright are left to themselves, working on their own as best they can (Brodinsky, 1980: 27E).

A major discovery reached by the investigator during the course of the study was that there really is no one program which is best for

all gifted children. Each district must create its own program after considering such items as the unique characteristics of its intended students, the people who might become involved in conducting it, and the processes to be nurtured through it. Treffinger (1979) promised at least fifty thousand choices for types of gifted programs. He did, however, suggest that developers not feel obliged to reinvent every model. He said that many programs were already described in the literature.

Missouri program developers may have been rather parochial when they investigated other models. From the responses to question one on the cover letter, 93.3 percent replied that they researched other Missouri programs, 46.7 percent checked nationally famous programs or suggestions developed by famous writers, and 40 percent observed programs from near-by states. Many Missouri programs do seem similar. However, this investigator has no information which would prove that the needs of the children in those districts are alike or unlike.

Recommendations

These recommendations seem reasonable.

1. In each district, educators should intentionally create a way to care for the gifted children within their schools. It is not adequate to assume classroom teachers are doing it.

2. Workers within the State Department of Education need to be more interested in research. They should consult with district faculties to improve their programs according to the facts researchers have discovered.

3. Technical assistance units, such as the ones recommended by Gold (1979) because of their individualized prescription approach, should

be investigated and either those or another in-service approach, if better, should be set up within reach of all teachers in the state.

4. Finally, and most importantly, the state universities should begin a master's or specialist's degree program for teachers of the gifted as soon as possible.

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APPENDIX A. Survey Instrument: Cover Letter

March 1981

Dear Administrator of a Gifted Program:

Attached are three survey forms. If you would be so kind, please direct one to a teacher in your gifted resource room, one to a teacher who has a gifted student in his/her regular classroom, and one to you as administrator of a gifted program. Additionally, would you please fill out the following?

I am grateful for your help.

1. Before your district chose the particular gifted program you use, what others did you research?
 - ☐ Other Missouri programs
 - ☐ Programs from near-by states
 - ☐ Nationally famous programs
 - ☐ Programs developed by famous writers on the gifted
 - ☐ Other (please specify)
2. What criteria does your district use in order to place a child in the program?
 - ☐ Above a specific IQ (individual test)
 - ☐ Above a specific IQ (group test)
 - ☐ Certain achievement test scores
 - ☐ Teacher recommendation
 - ☐ Parent nomination
 - ☐ Peer nomination
 - ☐ Self-nomination
 - ☐ Past performance (or grades)
 - ☐ Other (please specify)

Is there re-evaluation periodically of a child in the program?
3. What qualifications did/do you look for in teachers for your gifted program?
 - ☐ Teaching experience
 - ☐ Special classwork in gifted education
 - ☐ High intelligence
 - ☐ Security within self
 - ☐ Enthusiasm
 - ☐ Ability to do individualization of curriculum
 - ☐ Desire to work with gifted children
 - ☐ Flexibility
 - ☐ Stamina
 - ☐ Extensive knowledge of subject area
 - ☐ Ability to utilize innovative techniques
 - ☐ Ability to use strategies to foster high levels of thinking
 - ☐ Other (please specify)
4. Before the program began, did your entire faculty experience in-service training on it?
5. Would your district consider any form of acceleration of gifted students?
 - ☐ Early entrance to kindergarten
 - ☐ Combining two years' work into one
 - ☐ Skipping a course or grade
 - ☐ More rapid movement through subjects
 - ☐ Taking extra courses or summer sessions to shorten total time in school
 - ☐ Earning college credit for high school work
 - ☐ "Placing out" of certain courses by examination

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
13. "Giftedness" is a situational concept. When children show "giftedness" (that is, high interest, achievement, and creativity) during a specific subject, classroom teachers could recommend them for a turn in the resource room to look in-depth at that subject.					
14. A resource teacher could profitably encourage or aid a mainstream teacher in enrichment activities for her whole classroom so that there would be occasion for identifying children who could use the resource room to its best advantage.					
15. Classroom teachers too often cannot be relied on to identify "giftedness" in the form of creativity, achievement, and interest or ability in a subject area.					
16. Gifted program teachers should not be burdened with children who, though they have the necessary IQ, can't read or don't wish to work. The programs should be open to children who demonstrate that they can benefit from them.					
17. Some children possess such high levels of achievement and creativity that their teachers may be surprised when their lower IQ scores prevent them from participating in the gifted program.					
18. Once a child has been identified for the gifted program, he/she should be allowed to remain in it for a year.					
19. IQ tests and standardized achievement tests are <u>not</u> foolproof in identifying the gifted child. <u>Many</u> additional criteria should be considered.					
20. Children with a high IQ who don't work or who cause trouble in a classroom because they are bored should be placed in a gifted program as a means of challenging them.					
21. Gifted children are <u>not</u> different from other children in their development. They just develop at a faster rate.					
22. Some children do well on an IQ test but do not show "giftedness" on specific tasks within the classroom.					
23. We should continue to place children in a gifted program according to a cut-off IQ.					
24. Intellectually gifted children are actually different from other children, even those older than they, in their stages of learning and development.					
25. Gifted children basically need to learn the same things as non-gifted children although perhaps at a different rate.					
26. Many qualified authors are writing gifted program curricula which can provide background and activities on wide and varied subjects which teachers may use without having to create their own. That curricula should be an option.					
27. Gifted persons are highly product-oriented. Processes are paths for them rather than the goals of their creative efforts. Therefore, a gifted program should be product-oriented.					
28. Acceleration of gifted children should <u>not</u> be done because it is impractical, disruptive, and can cause social and emotional problems later.					

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
29. The resource room should be highly individualized with many learning centers and independent projects. The teacher should be a guide to learning and a true resource.					
30. The children's creative products or student-teacher questionnaires are proper data upon which evaluations should focus.					
31. Gifted children need modified content in their curriculum emphasizing basic issues, major questions, important human experiences, etc., which non-gifted children don't need.					
32. A good enrichment program has sequence, direction, and ultimate goals and is developed with particular students in mind.					
33. Gifted children are capable of doing higher process thinking. Therefore, a gifted program should be process-oriented; that is, a major goal would be teaching students the way learning is accomplished.					
34. Gifted children need a combination approach of acceleration in basic skills and enrichment to broaden thinking.					
35. The resource teacher needs to be a regular teacher as well, since there are many times when the entire gifted class needs to work on enrichment curriculum together.					
36. Behavioral objectives are an adequate way to evaluate a gifted program's student goals.					
37. Using your experience, your opinion, and/or research, please rank the types of gifted programs below in order of best (1) to worst (10). Feel free to leave blank any programs that you know nothing about.					

- _____ acceleration (early entrance, rapid movement through subjects, grade skipping, etc.)
- _____ separate self-contained class
- _____ regular classroom 4 days, gifted class 5th day
- _____ pulled out of regular class once each day
- _____ pulled out of regular class several times a week
- _____ resource teacher aids regular teacher with materials to use with her gifted students
- _____ mentor program
- _____ program before or after school
- _____ summer program
- _____ mini courses

38. Please mark an X beside any of the following models or processes you have used in your gifted class.

- _____ Bloom's Taxonomy
 - _____ Guilford's Structure of the Intellect
 - _____ Williams Model for Implementing Cognitive-Affective Behaviors in the Classroom
 - _____ Renzulli's 3 types of enrichment
 - _____ Other
- (Please specify if you would recommend it.)

APPENDIX B

RESERVOIR MODEL FOR IDENTIFICATION OF GIFTED AND TALENTED

1. Determine the percentage of students to be included in the program (not less than 1 percent or more than 10 percent).
2. Employ a group test, screen and cut at a point which will give 5 percent. Take the top 10 percent of this group and put them into the program. Place the remainder into the reservoir.
3. Circulate to each classroom teacher a paper in which he or she is asked to nominate the:
 - 3.1 best student
 - 3.2 child with the biggest vocabulary
 - 3.3 most original and creative child
 - 3.4 child with the most leadership ability
 - 3.5 most scientifically oriented child
 - 3.6 child who does the best critical thinking
 - 3.7 able child who is the biggest nuisance
 - 3.8 best motivated child
 - 3.9 child the other children like best
 - 3.10 child who is most ahead on grade placement
 - 3.11 brightest minority group child in the class
 - 3.12 child whose parents are most concerned about increasing the enrichment of his educational progress
4. Use an achievement battery and cut at a point which will yield 3 percent. Make a list of all students who are in the top 10 percent in numerical skills; add both of these lists to the reservoir.
5. Together with the principal, curriculum staff and guidance staff, plus a few teachers, go over and make a list of children who:
 - 5.1 have leadership positions
 - 5.2 achieved outstandingly in any special skills
 - 5.3 are the best representative of minority groups
 - 5.4 have influential parents
 - 5.5 are examples of reading difficulties but appear bright
 - 5.6 are believed bright, but may be emotionally disturbed
 - 5.7 about whom any single individual feels might be in the program

Place these in the reservoir. All pupils in the reservoir should now be ranked as to the number of times they have been mentioned. All children having three or more mentions should be automatically included in the program. All children having two citations should be sent for individual intelligence testing. If possible, children mentioned once should receive testing (Rubenzer, 1979: 307).

APPENDIX C. Missouri Map with Locations of Gifted Programs Marked





Southwest Missouri State University

Springfield, Missouri 65802

March 3, 1981

Dear Colleague:

As you can see by the information enclosed, Ms. Renee C. Goostree and Ms. Teresa J. Martin are conducting studies into specific characteristics of gifted programs. I am aiding them in their studies and desire your help if possible.

According to S. M. S. U. policy, we may conduct survey research in the public and private schools of Missouri, as well as other types of research, without parental permission if the schools' administrators consider the research to be a part of the ongoing instruction or pertinent to the needs of the school. When the data that is being requested has been tabulated and analyzed, we will be very happy to send the results to you.

In no way will the name of any school, child, or other identifying data be contained in the theses for which the data are being collected. And, we intend that the results add to the present knowledge related to gifted programs.

We wish that all of the research volunteers, especially the students (and their parents if necessary), be reminded of their rights as research volunteers. Participation is strictly voluntary. Your return of the information will be taken as an indication of consent to participate in this study.

In order to safeguard the confidentiality of responses, returned data sheets shall be secured with access and processing under control and supervision of the investigators.

We have contacted Dr. Nell Sanders in the Missouri State Department of Elementary and Secondary Education. She requested that we obtain some of our information from the computer storage in Jefferson City, but did ask to see the results of the findings. We hope that you will also be able to help us

Sincerely,

James R. Layton
James R. Layton, Ed. D.
Professor of Reading

office 417 836 5440
home 417 883 9346

Please feel free to contact me if there are any questions or concerns.

I did not agree to furnish names and addresses nor did we approve this collecting of data from school district

APPENDIX E. Numbers 1-36 on the Survey by Opposites*

1. A gifted program should quickly expand to all grades (K-12) no matter where it is begun. The gifted must not be ignored at any level.
7. The main thrust of a gifted program should be grades 4-8. Earlier, they are challenged enough working on basic skills. At high school, students may choose classes which will interest and challenge them.

8. High intelligence is a major characteristic needed to teach gifted children.

2. You don't have to be gifted to teach gifted children.

9. There are certain characteristics that differentiate good teachers from good teachers of the gifted.

3. Teachers of the gifted are actually no different than good teachers of all children.

5. Teachers working with gifted children in their mainstream class need to have training for it and a willingness to have that child in the classroom.

11. Good administrative policy places gifted children with a mainstream teacher indiscriminately. Each classroom and teacher needs to have their share of the brighter children.

12. All district teachers, administrators, and counselors should attend at least 2 workshops in gifted education before a district begins a gifted program.

6. It may be more effective to designate several teachers as teachers of the gifted than to try to provide in-service training for all teachers in the system.

4. Regular classroom teachers of gifted children may feel unqualified to develop their higher cognitive processes or may feel frustrated at a lack of time to work with them individually, even when there is outside help with resources from another teacher.

10. A gifted child can be adequately mainstreamed with no special class if the regular teacher uses an individualized approach and receives outside help with resources.

14. A resource teacher could profitably encourage or aid a mainstream teacher in enrichment activities for her whole classroom so that there would be occasion for identifying children who could use the resource room to its best advantage.

15. Classroom teachers too often cannot be relied on to identify "giftedness" in the form of creativity, achievement, and interest or ability in a subject area.

16. Gifted program teachers should not be burdened with children who, though they have the necessary IQ, can't read or don't wish to work. The programs should be open to children who demonstrate that they can benefit from them.
20. Children with a high IQ who don't work or who cause trouble in a classroom because they are bored should be placed in a gifted program as a means of challenging them.

17. Some children possess such high levels of achievement and creativity that their teachers may be surprised when their lower IQ scores prevent them from participating in the gifted program.
22. Some children do well on an IQ test but do not show "giftedness" on specific tasks within the classroom.

19. IQ tests and standardized achievement tests are not foolproof in identifying the gifted child. Many additional criteria should be considered.
23. We should continue to place children in a gifted program according to a cut-off IQ.

24. Intellectually gifted children are actually different from other children, even those older than they, in their stages of learning and development.
21. Gifted children are not different from other children in their development. They just develop at a faster rate.

31. Gifted children need modified content in their curriculum emphasizing basic issues, major questions, important human experiences, etc., which non-gifted children don't need.
25. Gifted children basically need to learn the same things as non-gifted children although perhaps at a different rate.

13. "Giftedness" is a situational concept. When children show "giftedness" (that is, high interest, achievement, and creativity) during a specific subject, classroom teachers could recommend them for a turn in the resource room to look in-depth at that subject.
18. Once a child has been identified for the gifted program, he/she should be allowed to remain in it for a year.

32. A good enrichment program has sequence, direction, and ultimate goals and is developed with particular students in mind.
26. Many qualified authors are writing gifted program curricula which can provide background and activities on wide and varied subjects which teachers may use without having to create their own. That curricula should be an option.

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-
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33. Gifted children are capable of doing higher process thinking. Therefore, a gifted program should be process-oriented; that is, a major goal would be teaching students the way learning is accomplished.
-
34. Gifted children need a combination approach of acceleration in basic skills and enrichment to broaden thinking.
28. Acceleration of gifted children should not be done because it is impractical, disruptive, and can cause social and emotional problems later.
-
30. The children's creative products or student-teacher questionnaires are proper data upon which evaluations should focus.
36. Behavioral objectives are an adequate way to evaluate a gifted program's student goals.

*In each of the above, the first of the pair is considered positive, the second, negative.

APPENDIX F. Statistical Package SPSSV8

DIXON GIFTED SURVEY MAY 81 PART ONE

FIXED (1) /1 SUB 4-5, OTHERPG 7, NEARBY 11, NATIONP 13, WRITERP 15,
 NONOFAB 15, IQINDIV 17, IQGROUP 19, ACHIEVE 21, TEACHER 23,
 PARENTN 25, PEERNOM 27, SELFNM 29, PASTPER 31, DIFFERT 33,
 REEVALU 35, TEACHEX 37, CLASSGF 39, HIGHIQS 41, SELFSEC 43,
 ENTHUSM 45, INDVCR 47, DESIREC 49, FLEXIBL 51, STAMINA 53,
 KNOWLDG 55, INNOVAT 57, FOSTERT 59, WHATELS 61, INFTRVS 63,
 EARLYKG 65, TWOINON 67, SKIPAGD 69, RAPIDMV 71, EXTRACR 73,
 COLLEGE 75, PLACEOT 77

CARD

CASES=30/VARIABLES=SUB TO PLACEOT

GENERAL=OTHERPG TO PLACEOT

ALL

DIXON GIFTED SURVEY MAY 81 PART TWO

FIXED (1) /1 SUB 4-5, POSITIN 7, GRDLEVL 8, NUMCHLD 9-10,
 YEAREXP 11, GIFTEXS 12, EXPANDQ 14, GIFTTCH 15, DIFFERT 16,
 UNQUALF 17, MAINSTR 18, DESIGNA 19, THRUST8 20, HIGHQI 21,
 CHARACT 22, NOSPECL 23, ADMINPO 24, WORKSH 25, SITUATN 27,
 RESCURS 28, CREATIV 29, BENEFIT 30, SURPRIZ 31, REMAINS 32,
 IQTESTS 33, BOREDST 34, FASTRAT 35, DOWELLQ 36, CUTOFFQ 37,
 STAGESD 38, LEARNM 39, AUTHORS 40, PRODUCT 41, ACCELRT 42,
 HIGHIND 44, CREATFF 45, MODIFYC 46, ENRICHM 47, THINKNG 48,
 COMBINA 49, TOGETHR 50, BEHOBJT 51, AKSELRT 53, SEPARTD 54,
 REGCLSS 55, OUTRECD 56, WEEKOUT 57, AIDRESR 58, MENTORP 59,
 AFTERSC 60, SUMMERP 61, MINICRS 62, BLOOMST 65, GUILFOR 66,
 WILLIAM 67, RENZULI 68, SOMXWAY 68

CARD

CASES=10/VARIABLES=SUB TO DIFFERT, SOMXWAY

TABLES=EXPANDQ TO SOMXWAY BY POSITIN TO GIFTEXS

1

DIXON GIFTED SURVEY THREE

FIXED (1) /1 SUB 4-5, POSITIN 7, GRDLEVL 8, NUMCHLD 9-10,
 YREXP 11, GIFTEXS 12, EXELERA 15-16, SEPARAT 17-18, REGULA4 19-20,
 PULLONE 21-22, PULLSEV 23-24, RESAIDS 25-26, MENTORP 27-28,
 BEFORAF 29-30, SUMMERS 31-32, MINICOR 33-34

CARD

CASES=10/VARIABLES=SUB TO GIFTEXS

TABLES=GIFTEXS TO MINICOR BY POSITIN TO GIFTEXS

1